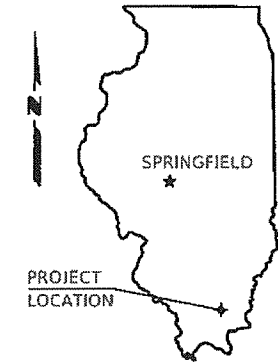




06-12-2020 LETTING ITEM 192

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION PLANS FOR PROPOSED SURFACE TRANSPORTATION PROGRAM OFF SYSTEM BRIDGE

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	J
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	



FAS ROUTE 898 (HARCO ROAD)  
SECTION 17-00156-00-BR  
PROJECT NO. AFJH(884)  
JOB NO. C-99-044-18  
OVER OLD AMAX HAUL ROAD  
**SALINE COUNTY**

SUMMARY OF QUANTITIES

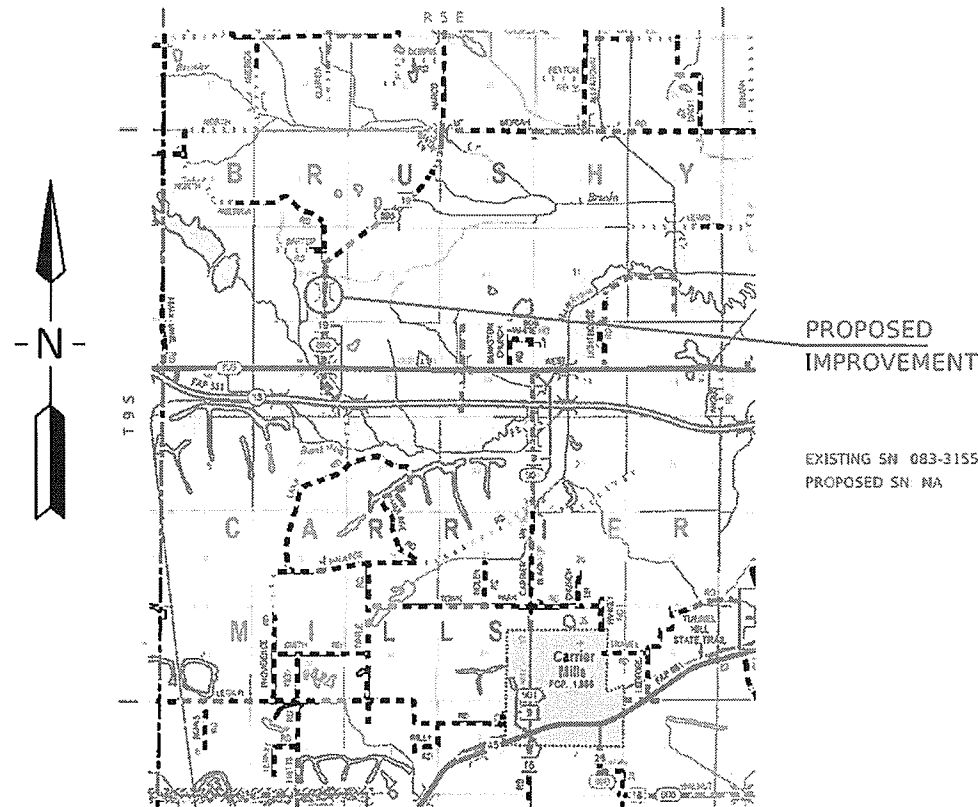
CODE NO.	PAY ITEM	UNIT	TOTAL
* X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.7
* X6333500	TRAFFIC BARRIER TERMINAL REMOVAL	EACH	4
* X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
* Z0033700	LONGITUDINAL JOINT SEALANT	FOOT	513
20200100	EARTH EXCAVATION	CU YD	160
20400800	FURNISHED EXCAVATION	CU YD	22,392
25100630	EROSION CONTROL BLANKET	SQ YD	3,268
28000400	PERIMETER EROSION BARRIER	FOOT	599
28100207	STONE RIPRAP, CLASS A4	TON	104
28100209	STONE RIPRAP, CLASS A5	TON	29
28200200	FILTER FABRIC	SQ YD	147
35100100	AGGREGATE BASE COURSE, TYPE A	TON	428
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	1,427
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	370
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	197
40604052	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5 MIX "C", N70	TON	104
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SQ YD	231
48101200	AGGREGATE SHOULDERS, TYPE B	TON	311
* 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	160
542A4669	PIPE CULVERTS, CLASS A, TYPE 7 54"	FOOT	148
54213699	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 54"	EACH	2
Δ 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	475
Δ 63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	600
67100100	MOBILIZATION	L SUM	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28
Δ 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	16,300
Δ 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	1

\* SEE SPECIAL PROVISIONS  
Δ SPECIALTY ITEMS

INDEX OF SHEETS

- 1. COVER SHEET
  - 2. TYPICAL SECTIONS
  - 3. PLAN & PROFILE
  - 4. EROSION CONTROL PLAN
  - 5. GUARDRAIL LAYOUT
  - 6.-12. EXISTING BRIDGE PLANS
  - 13.-17. CROSS SECTIONS
- STANDARDS 000001-07 STD SYMBOLS, ABBREVIATIONS & PATTERNS  
 280001-07 TEMPORARY EROSION CONTROL SYSTEMS  
 542301-03 PRC FLARED END SECTION  
 630001-12 STEEL PLATE BEAM GUARDRAIL  
 701901-08 TRAFFIC CONTROL DEVICES  
 780001-05 TYPICAL PAVEMENT MARKINGS  
 781001-04 RAISED REFLECTIVE PAVEMENT MARKERS  
 BLR 21-9 TYP APPLICATION OF TRAF CONTR DEVICES

CLASSIFICATION : MAJOR COLLECTOR  
ADT : 1,785  
DESIGN SPEED : 50 MPH

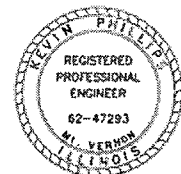


LOCATION MAP

SCALE: 1" = 2 MILES

NET LENGTH OF IMPROVEMENT = 300.00 FT. = 0.0568 MILES

CONTRACT NO. 99600

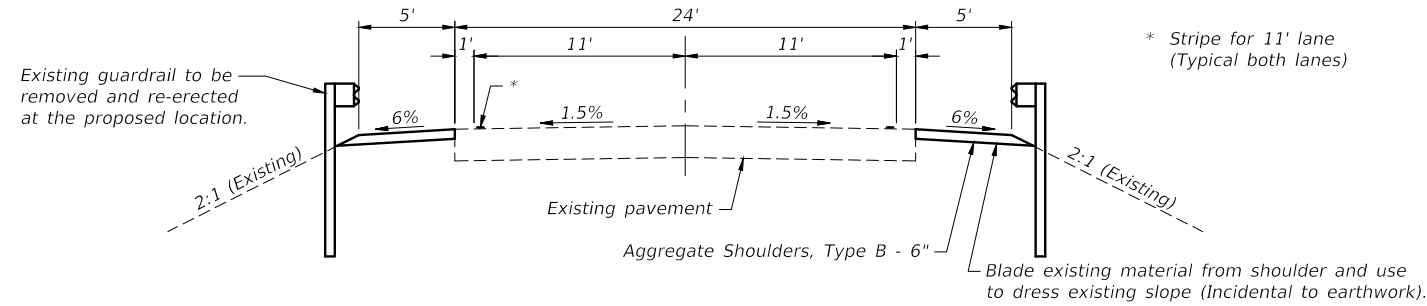


*Kevin Phillips*  
Kevin Phillips  
PROFESSIONAL ENGINEER  
#062-047293  
EXPIRES NOV. 30, 2021

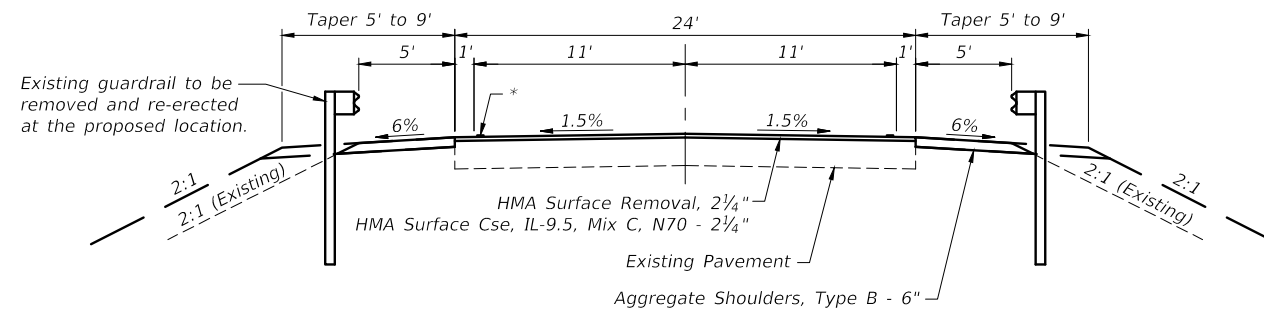
**Round Table Design, Inc.**  
PROFESSIONAL ENGINEERING - LAND SURVEYING  
1457 HIGHWAY 145 S HARRISBURG, IL (618) 253-8017

ILLINOIS DEPARTMENT OF TRANSPORTATION	
Approved	<i>March 6, 2020</i> <i>Larry Ribp</i> Saline County Engineer
Passed	<i>03/30/2020</i> <i>[Signature]</i> District Engineer of Local Roads and Streets
Releasing for Bid Based on Limited Review	<i>03/30/2020</i> <i>Keith Roberts</i> Keith Roberts, P.E. Acting Region Five Engineer

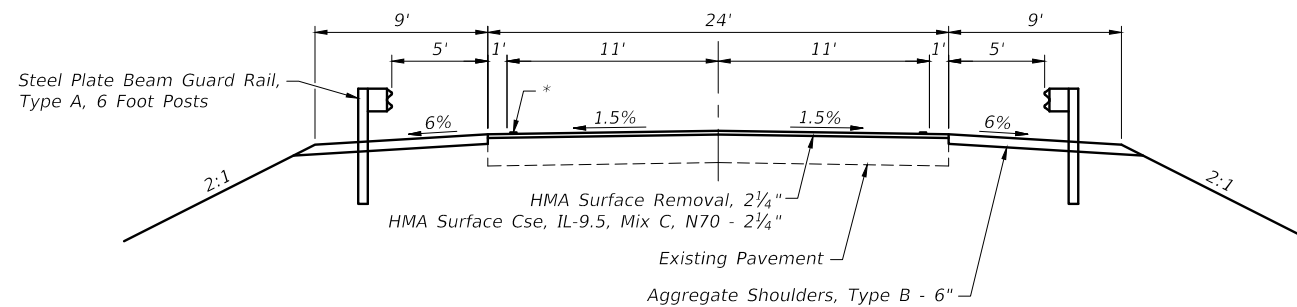
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	2
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	



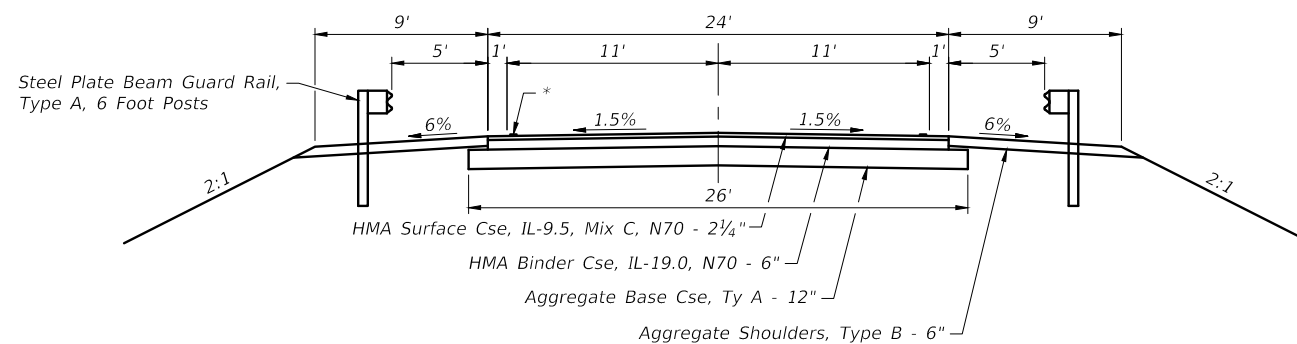
**PROPOSED TYPICAL SECTION**  
 STA 39+81 - STA 41+00  
 STA 44+00 - STA 45+19



**PROPOSED TYPICAL SECTION**  
 STA 41+00 - STA 41+31.3  
 STA 43+68.7 - STA 44+00



**PROPOSED TYPICAL SECTION**  
 STA 41+31.3 - STA 41+43.4  
 STA 43+56.6 - STA 43+68.7



**PROPOSED TYPICAL SECTION**  
 STA 41+43.4 - STA 43+56.6

**GENERAL NOTES**

Any mention of "prime" in these plans shall be construed to mean either Bituminous Materials (Prime Coat) or Bituminous Materials (Tack Coat) in accordance with Section 406 of the Standard Specifications for Road and Bridge Construction.

Bituminous Materials Prime/Tack Coat shall be applied to the full width of the existing surface or aggregate base at the rates shown below.

The location of underground utilities shown on the plans is an approximation and is included for information only.

Factors used for quantity calculations are as follows:

- Hot-Mix Asphalt ..... 112.0 Lbs/Sq Yd/Inch
- Aggregate/Riprap ..... 2.025 Tons/Cu Yd
- Bit Materials (Prime Coat),  
on Agg Base ..... 0.25 Lbs/Sq Ft
- Bit Materials (Tack Coat),  
on HMA Base ..... 0.05 Lbs/Sq Ft
- on HMA Lift ..... 0.025 Lbs/Sq Ft

**PAINT PAVEMENT MARKING - LINE 4" (FT)**

Location	Centerline (Yellow Dashed)	Edge Line (White Solid)	No Passing (Yellow Solid)
Sta 29+25 to Sta 70+00	1,800	8,150	6,350

No Passing Zone - North bound lane from Sta 29+25 to Sta 61+00  
 South bound lane from Sta 38+25 to Sta 70+00

See Standard 780001 for typical pavement markings.

**HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

Mixture Use:	HMA Binder Course, IL-19.0, N70
PG:	PG64-22
RAP% (Max):	10
Design Air Voids:	4% @ N <sub>des</sub> 70
Mixture Composition: (Gradation Mixture)	IL-19.0mm
Friction Aggregate:	None

Mixture Use:	HMA Surface Course, IL-9.5 Mix "C", N70
PG:	PG64-22
RAP% (Max):	10
Design Air Voids:	4% @ N <sub>des</sub> 70
Mixture Composition: (Gradation Mixture)	IL-9.5mm
Friction Aggregate:	C Surface

**TYPICAL SECTIONS**

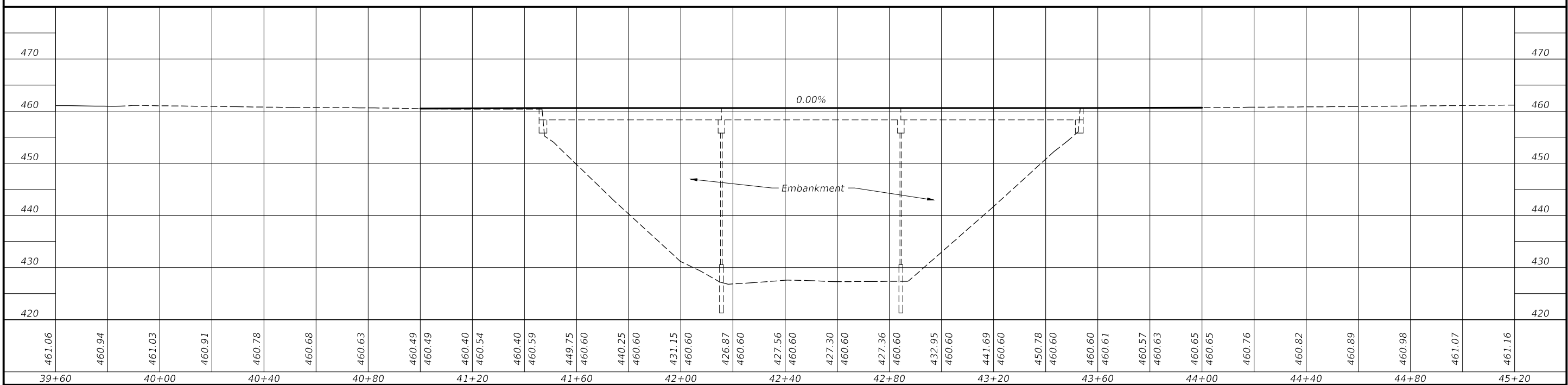
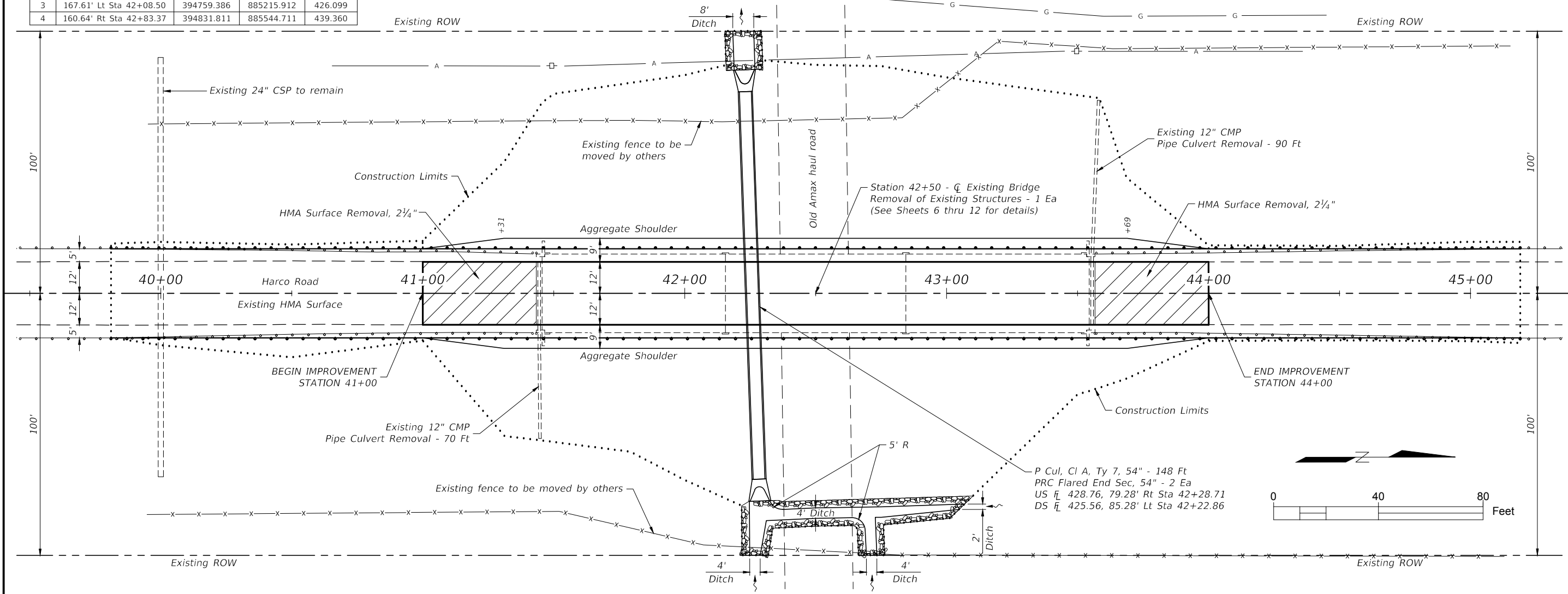
FAS ROUTE 898 (HARCO ROAD)  
 OLD AMAX HAUL ROAD OVERPASS  
 SECTION 17-00156-00-BR  
 SALINE COUNTY

**PAVEMENT DESIGN**

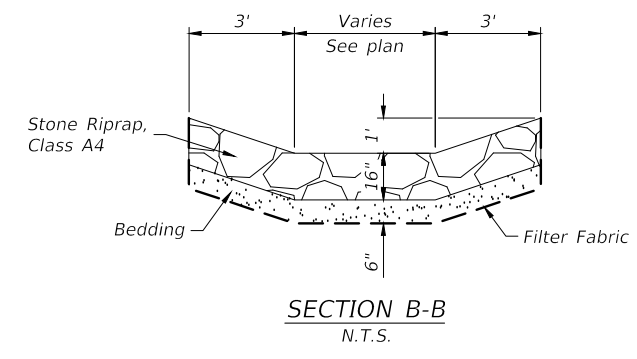
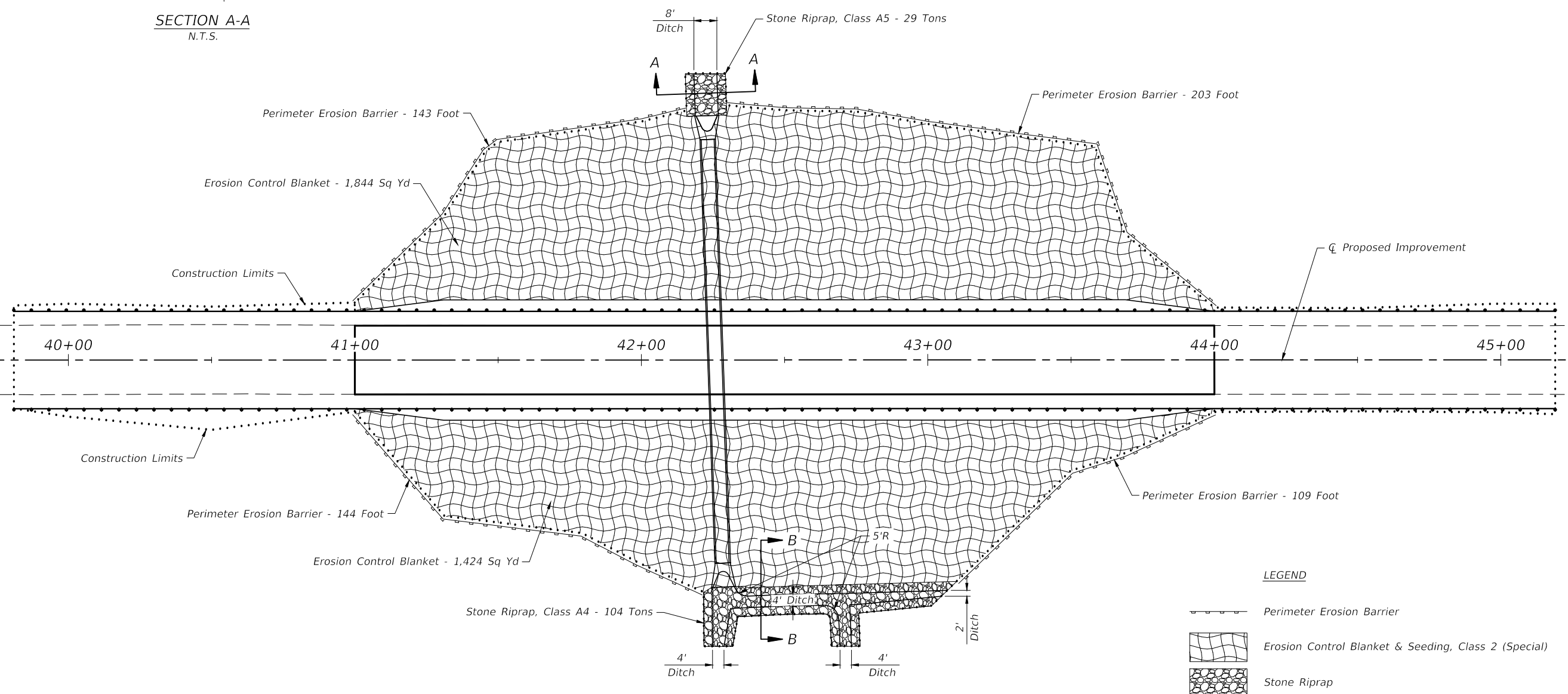
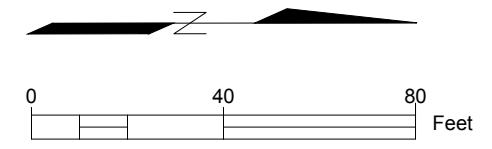
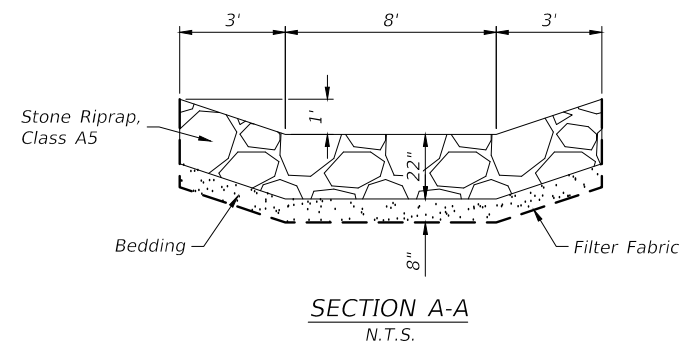
Design Period: 20 Years  
 Structural Design Traffic: 1,785  
 PV: 1,500 SU: 160 MU: 125  
 Road Class: III  
 Traffic Factor: 0.66  
 Subgrade Support Rating: Poor  
 Design PG Binder: PG 64-22  
 Design HMA Temp: 80.5°  
 Design HMA Microstrain: 137  
 Design HMA Modulus: 545 ksi

Control Points (Iron Pin)				
No.	Location	Northing	Easting	Elevation
1	22.45' Lt Sta 45+82.71	395132.509	885363.857	458.704
2	19.01' Rt Sta 39+80.27	394529.777	885400.818	459.602
3	167.61' Lt Sta 42+08.50	394759.386	885215.912	426.099
4	160.64' Rt Sta 42+83.37	394831.811	885544.711	439.360

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	3
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	



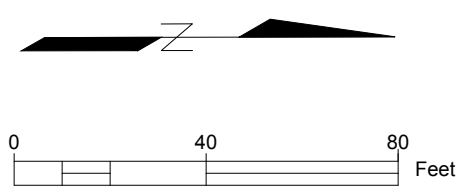
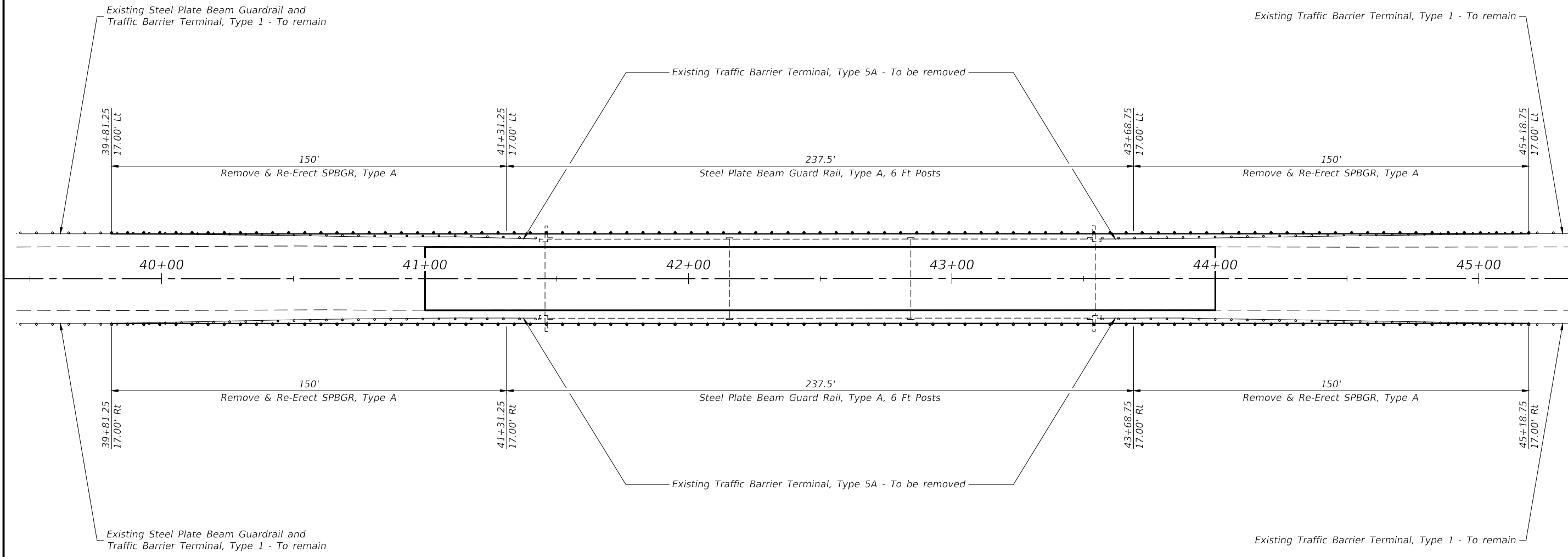
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	4
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	



EROSION CONTROL PLAN

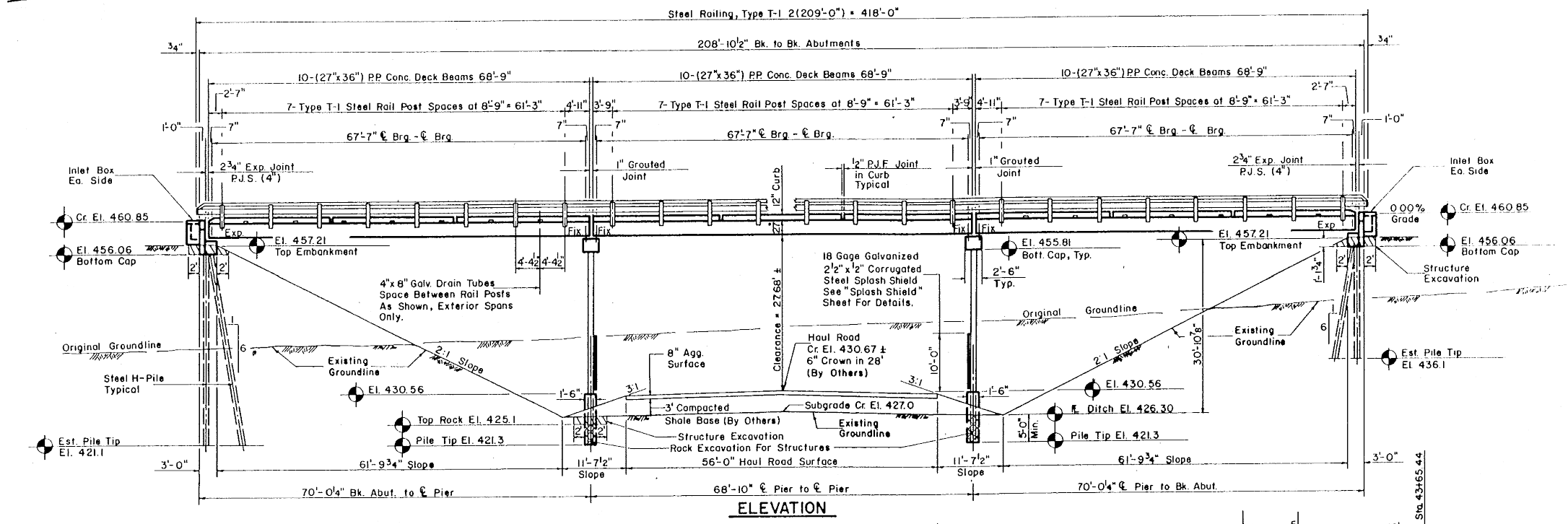
FAS ROUTE 898 (HARCO ROAD)  
 OLD AMAX HAUL ROAD OVERPASS  
 SECTION 17-00156-00-BR  
 SALINE COUNTY

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	5
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	

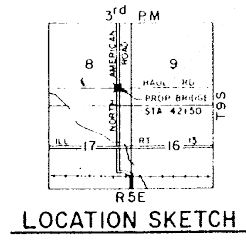


**GUARDRAIL LAYOUT**  
 FAS ROUTE 898 (HARCO ROAD)  
 OLD AMAX HAUL ROAD OVERPASS  
 SECTION 17-00156-00-BR  
 SALINE COUNTY

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	6
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	

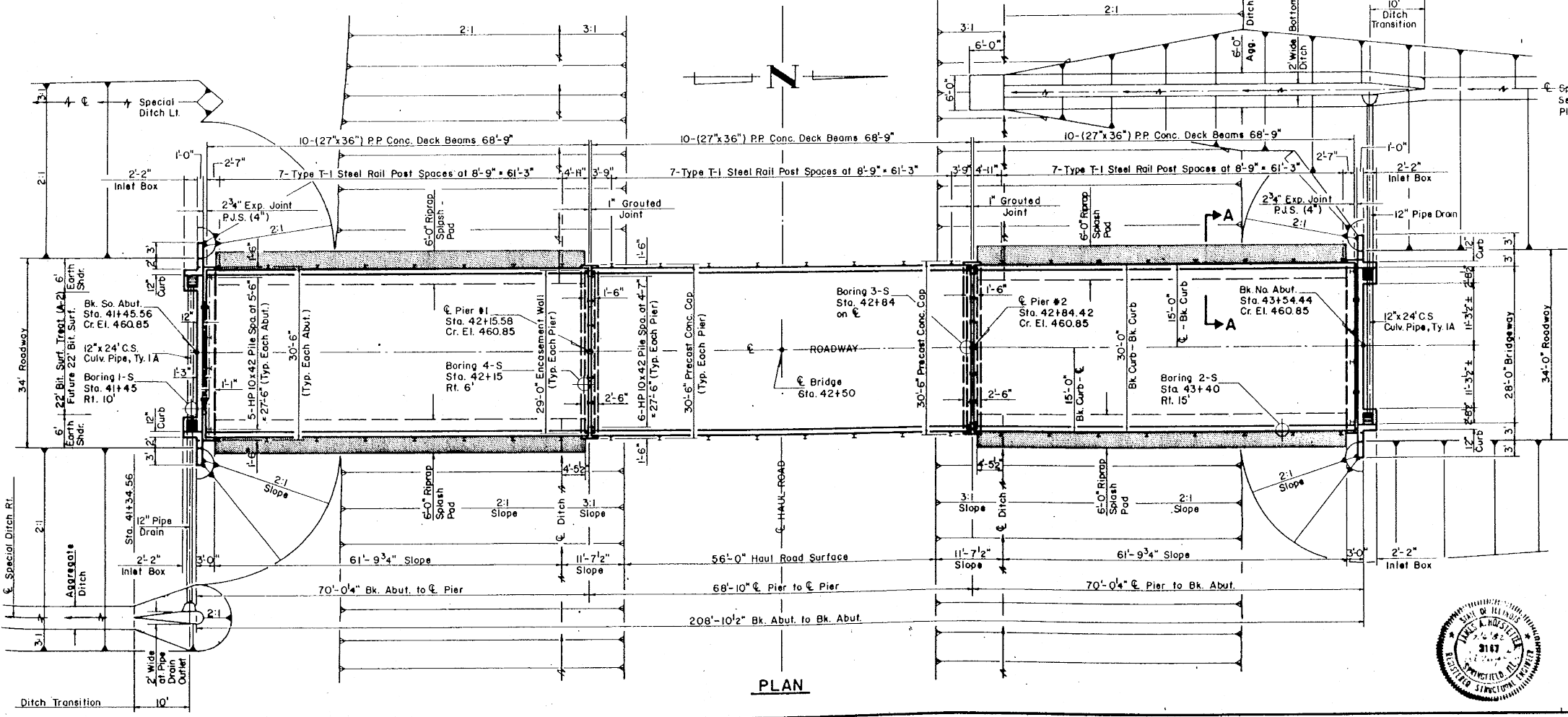


**ELEVATION**

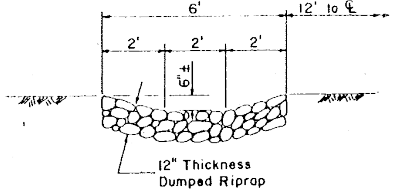


STRUCTURE NO 083-3155  
 STA 42+50  
 BUILT 198 BY  
 SALINE COUNTY  
 SEC. 81-00096-00-PV  
 LOADING HS-20

**NAME PLATE**  
(STD 2113)



**PLAN**



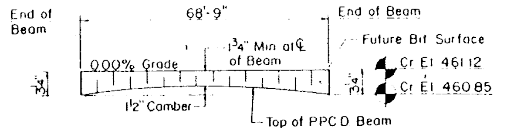
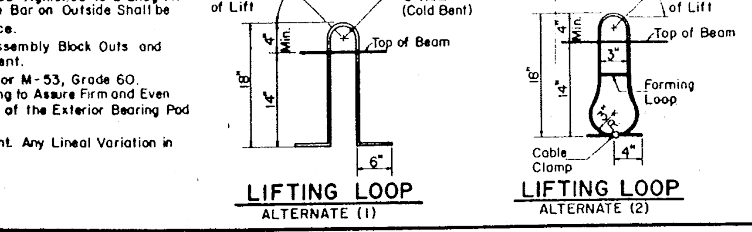
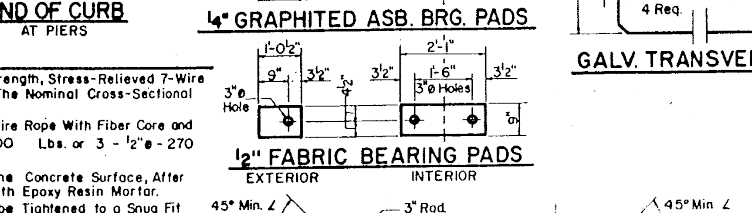
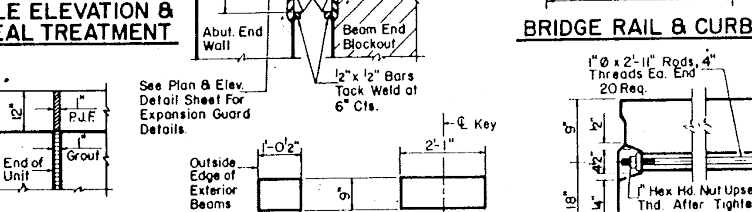
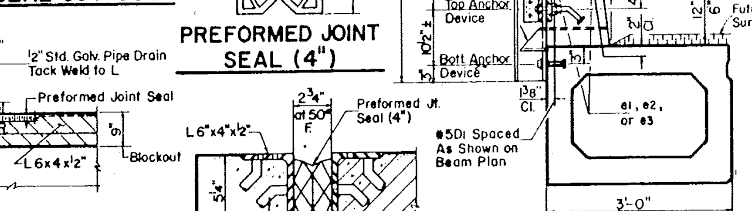
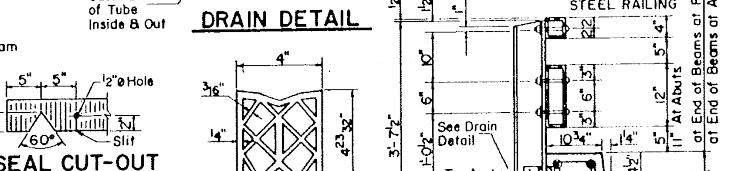
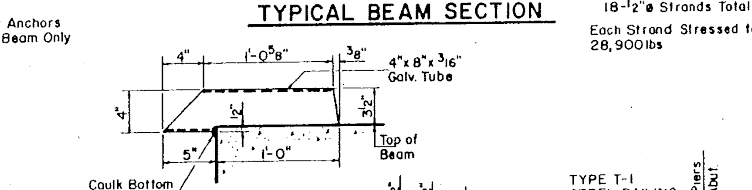
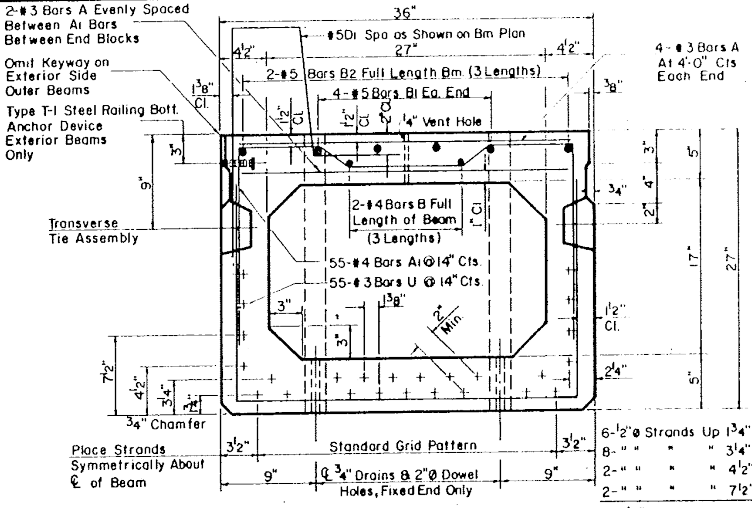
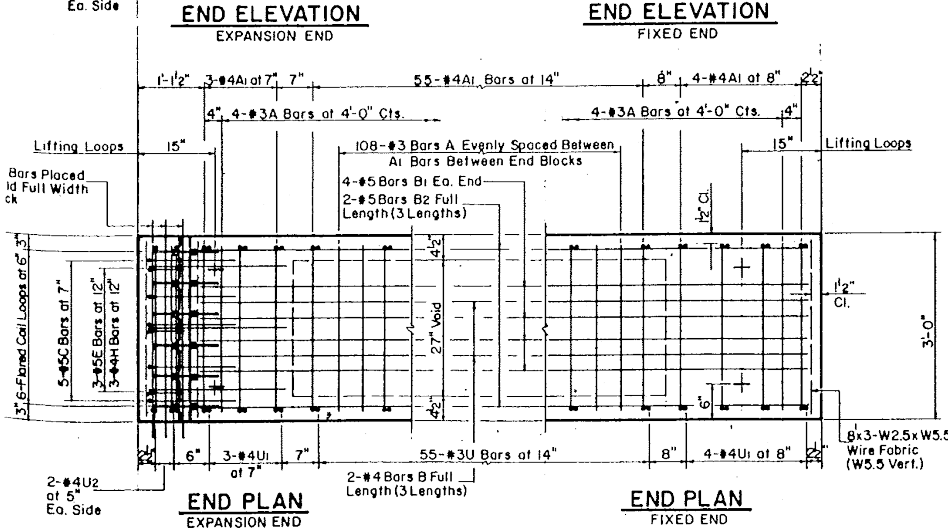
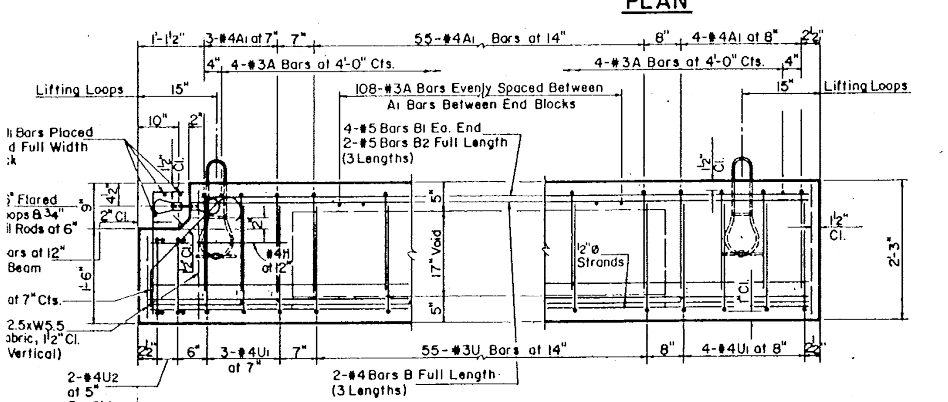
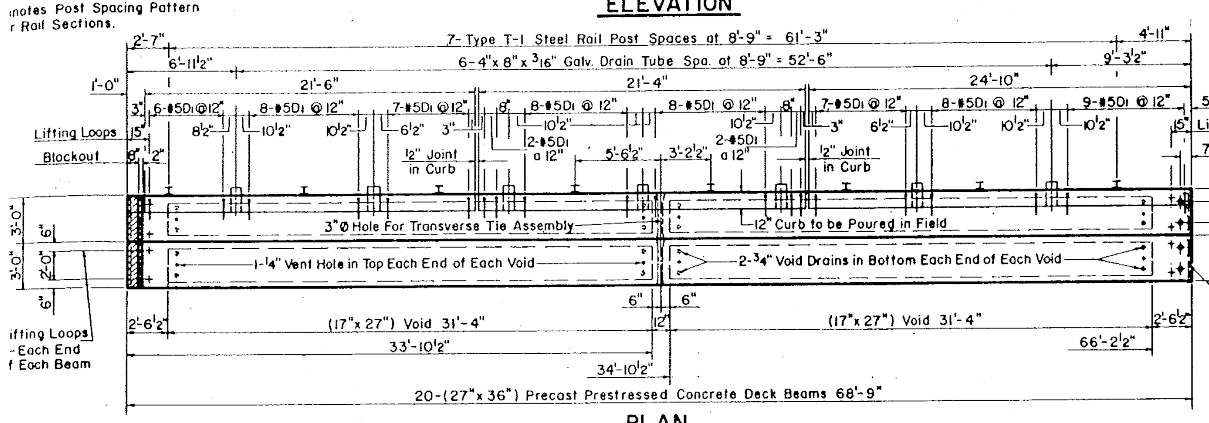
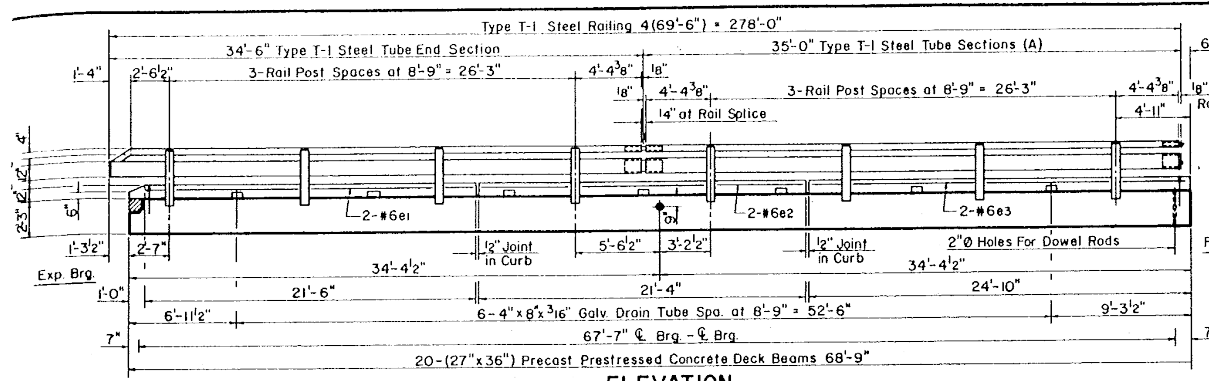
**SECTION A-A**  
**RIPRAP SPLASH PAD**

"I Certify That to The Best of my Knowledge, Information and Belief, This Bridge Design is Structurally Adequate For The Design Loading Shown on The Plans. The Design is an Economical One For The Style of Structure and Complies With Requirements of The Current A.A.S.H.T.O. Standard Specifications For Highway Bridges."

**GENERAL PLAN & ELEVATION**  
**FOR INFORMATION ONLY**



**EXISTING BRIDGE PLANS**  
 FAS ROUTE 898 (HARCO ROAD)  
 OLD AMAX HAUL ROAD OVERPASS  
 SECTION 17-00156-00-BR  
 SALINE COUNTY



**SHOP MATERIAL LIST (20 BEAMS)**

BAR	NO	SIZE	LENGTH	SHAPE
A	2320	3	2'-9"	
A1	1240	4	6'-1"	
B	120	4	2'-9"	
B1	120	5	2'-9"	
B2	120	5	2'-9"	
C	100	5	2'-11/2"	
D1	260	5	4'-2"	
E	60	5	2'-6"	
H	60	4	2'-3"	
U	1100	3	6'-3"	
U1	140	4	6'-3"	
U2	80	4	6'-3"	
Cl	120	3/4" x 6" Flared Coil Loops		
L	32	Bottom Anchor Device		
L1	80	Lifting Loops		

Beam Weight = 41,640 # Each  
See Type T-1 Railing Sheet For Top & Bottom Anchor Device Details.

**SHIPPING LIST (20 BEAMS)**

ITEM	UNIT	QUANTITY
1/2" x 2-1/2" Transverse Tie Rod	Each	20
1" x 3" Sleeve Nut		18
1" Hex Hd Nut		4
1/4" x 1/2" Washer		4
Graph. Asb. Brg. Pad 9x12x1/4	Each	8
Graph. Asb. Brg. Pad 9x25x1/4		36
Fab. Brg. Pad 9x12x1/2		18
Fab. Brg. Pad 9x25x1/2		18
1/8" Fab. Adj. Shim 9x12x1/2		132
3/4" x 1/8" Dowel Rods		80
3/4" x 6" Flared Coil Loops	Each	120
3/4" x 6" Coil Rod		120
Tube Drain 1 1/2" x 4" x 1075		28
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	4125

**BILL OF MATERIAL**

BAR	NO	SIZE	LENGTH	SHAPE
e1	8	6	21'-4"	
e2	8	6	21'-0"	
e3	8	6	24'-6"	
H1	6	5	29'-8"	
Class X Concrete		Cu. Yd.		11.0
Precast Prestressed Concrete Deck Beams (27" Depth)		Sq. Ft.		4125
Reinforcement Bars		Pound		989
Preformed Joint Sealer 4"		Lin. Ft.		60

See General Plan & Elevation Detail Sheet For Expansion Guard Details and End of Beam Blockout Details.

**GENERAL NOTES**

Prestressing Strand shall be Non-Galvanized High-Strength, Stress-Relieved 7-Wire Strand, Grade 270. The Nominal Diameter shall be 1/2" and the Nominal Cross-Sectional Area shall be 0.153 Sq. In.

Lifting Loops shall be 3/4" Diameter, 6x25 Class Wire Rope With Fiber Core and shall have a Minimum Ultimate Tensile Strength of 46,000 Lbs. or 3 - 1/2" - 270 K.S.I. Strands.

Lifting Loops shall be Cut or Burned Off 1" Below the Concrete Surface, After Beams Have Been Set in Place, and the Area Repaired With Epoxy Resin Mortar.

The 1" Rods in the Transverse Tie Assembly shall be Tightened to a Snug Fit and the Threads Set. Pockets That Receive Transverse Tie Bar on Outside shall be Filled With Grout After Transverse Tie Assembly is in Place.

Grouting For Longitudinal Shear Keys, Outside Tie Assembly Block Outs and Bearing Anchor Bars shall be Dry Pack, 2:1 Sand & Cement.

Reinforcement Bars shall Conform to AASHTO: M-31 or M-53, Grade 60. The Bearing Seat Surfaces shall be Adjusted by Shimming to Assure Firm and Even Bearing. Two 1/8" Fabric Adjusting Shims of the Dimensions of the Exterior Bearing Pad shall be Provided For Each Bearing.

Ends of Beams shall be Aligned at the Expansion Joint. Any Linear Variation in the Beam Lengths shall be Placed at the Fixed Ends.

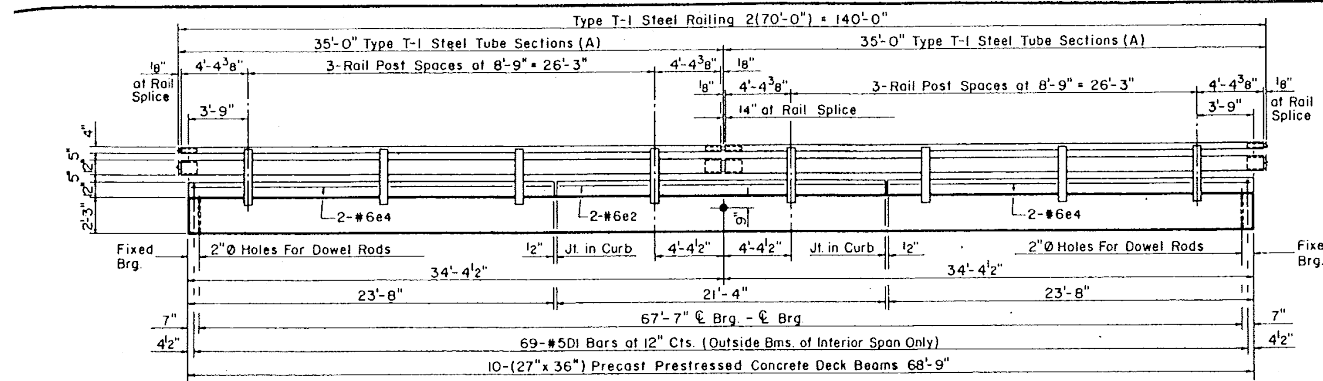
**SUPERSTRUCTURE EXTERIOR SPAN**

FOR INFORMATION ONLY

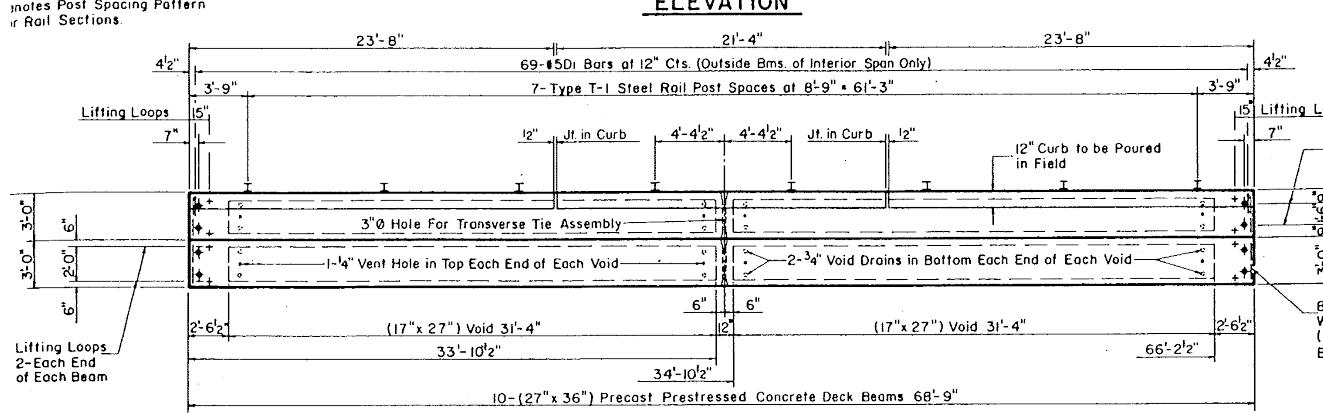
EXISTING BRIDGE PLANS

FAS ROUTE 898 (HARCO ROAD)  
OLD AMAX HAUL ROAD OVERPASS  
SECTION 17-00156-00-BR  
SALINE COUNTY

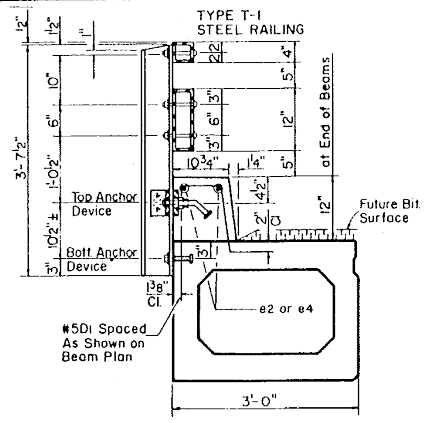
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	8
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	



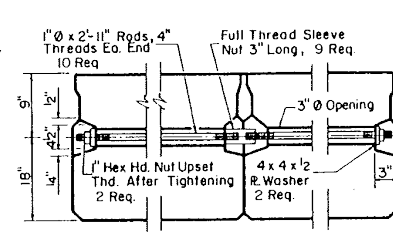
**ELEVATION**



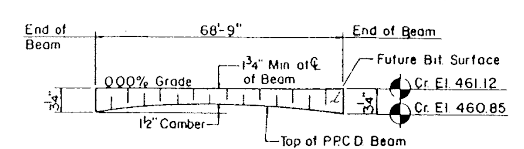
**PLAN**



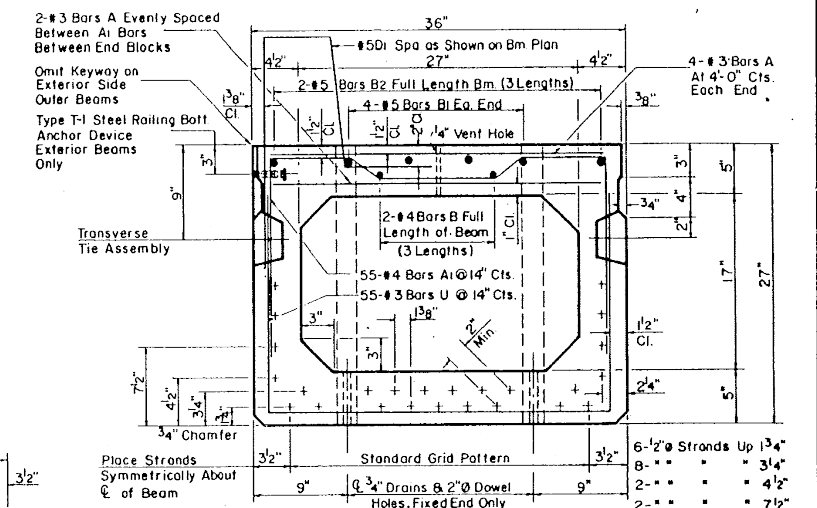
**BRIDGE RAIL & CURB**



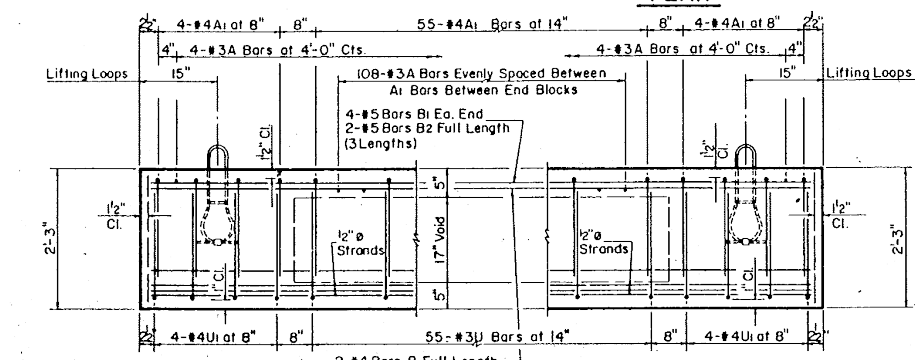
**GALV. TRANSVERSE TIE ASSEMBLY**



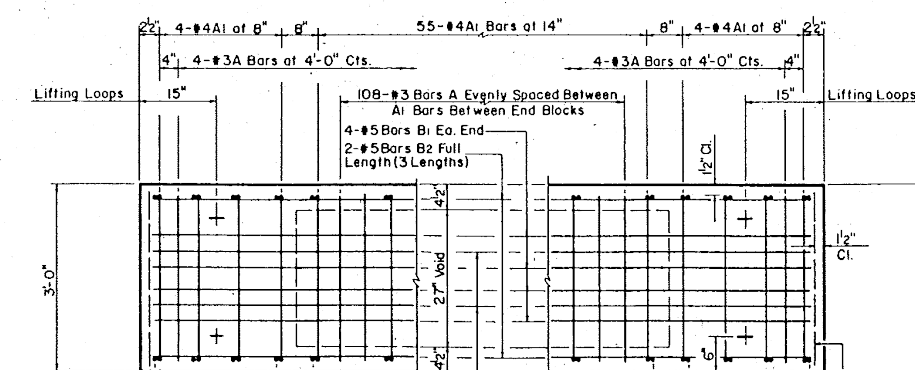
**ANTICIPATED CAMBER DIAGRAM**



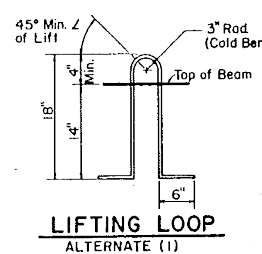
**TYPICAL BEAM SECTION**



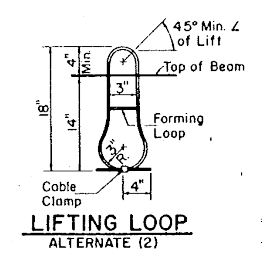
**TYPICAL FIXED END ELEVATIONS**



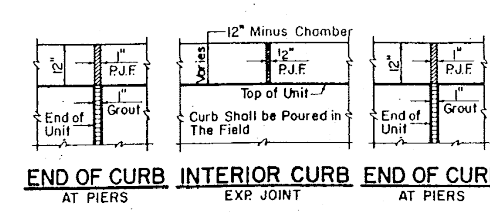
**TYPICAL FIXED END PLANS**



**LIFTING LOOP ALTERNATE (1)**



**LIFTING LOOP ALTERNATE (2)**



**END OF CURB INTERIOR CURB END OF CURB**

**GENERAL NOTES**

Prestressing Strand shall be Non-Galvanized High-Strength, Stress-Relieved 7-Wire Strand, Grade 270, The Nominal Diameter shall be 1/2" and The Nominal Cross-Sectional Area shall be 0.153 Sq. In.  
 Lifting Loops shall be 3/4" Diameter, 6x25 Class Wire Rope With Fiber Core and Shall Have a Minimum Ultimate Tensile Strength of 46,000 Lbs. or 3 - 1/2" - 270 K.S.I. Strands.  
 Lifting Loops shall be Cut or Burned Off 1" Below The Concrete Surface, After Beams Have Been Set in Place, and The Area Repaired With Epoxy Resin Mortar.  
 The 1" Rods in The Transverse Tie Assembly shall be Tightened to a Snug Fit and The Threads Set. Pockets That Receive Transverse Tie Bar on Outside shall be Filled With Grout After Transverse Tie Assembly is in Place.  
 Grouting For Longitudinal Shear Keys, Outside Tie Assembly Block Outs and Bearing Anchor Bars shall be Dry Pack, 2:1 Sand & Cement.  
 Reinforcement Bars shall conform to AASHTO: M-31 or M-53, Grade 60.  
 The Bearing Seat Surfaces shall be Adjusted by Shimming to Assure Firm and Even Bearing. Two 1/8" Fabric Adjusting Shims of The Dimensions of The Exterior Bearing Pod shall be Provided For Each Bearing.

**SHOP MATERIAL LIST (10 BEAMS)**

BAR	NO.	SIZE	LENGTH	SHAPE
A	1160	3	2'-9"	
A1	630	4	6'-1"	
B	60	4	24'-0"	
B1	80	5	13'-9"	
B2	60	5	24'-4"	
DI	138	5	4'-2"	
U	550	3	6'-3"	
U1	80	4	6'-3"	

I	16	Bottom Rail Anchor Device
L	40	Lifting Loops

Beam Weight = 41,640 # Each  
 See Type T-1 Railing Sheet For Top & Bottom Anchor Device Details.

**REINFORCEMENT BARS**

BAR	NO.	SIZE	LENGTH	SHAPE
e2	4	6	21'-0"	
e4	8	6	23'-4"	

**SHIPPING LIST (10 BEAMS)**

ITEM	UNIT	QUANTITY
1" x 2-1/2" Transverse Tie Rod	Each	10
1" x 3" Sleeve Nut	"	9
1" Hex Head Nut	"	2
1/2" R. Washer 4x4x1/2"	"	2
Fab. Brg. Pad 9x12 1/2 x 1/2"	"	4
Fab. Brg. Pad 9x25 x 1/2"	"	16
1/8" Fab. Adj. Shim 9x12 1/2"	"	44
3/4" x 18" Dowel Rods	"	40
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	2063

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Class X Concrete	Cu. Yd.	4.8
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	2063
Reinforcement Bars	Pound	407

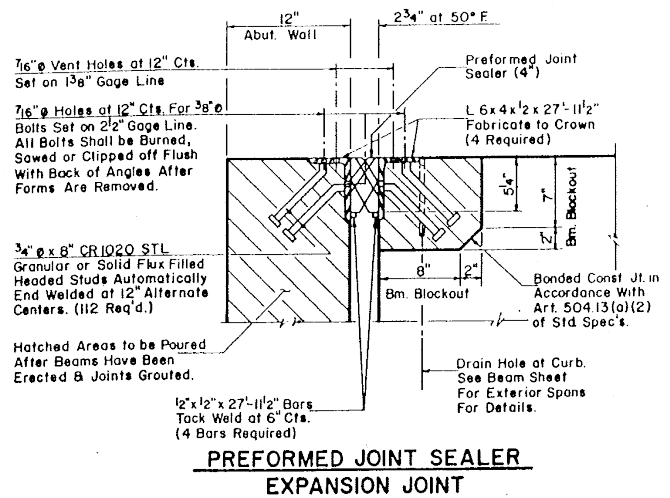
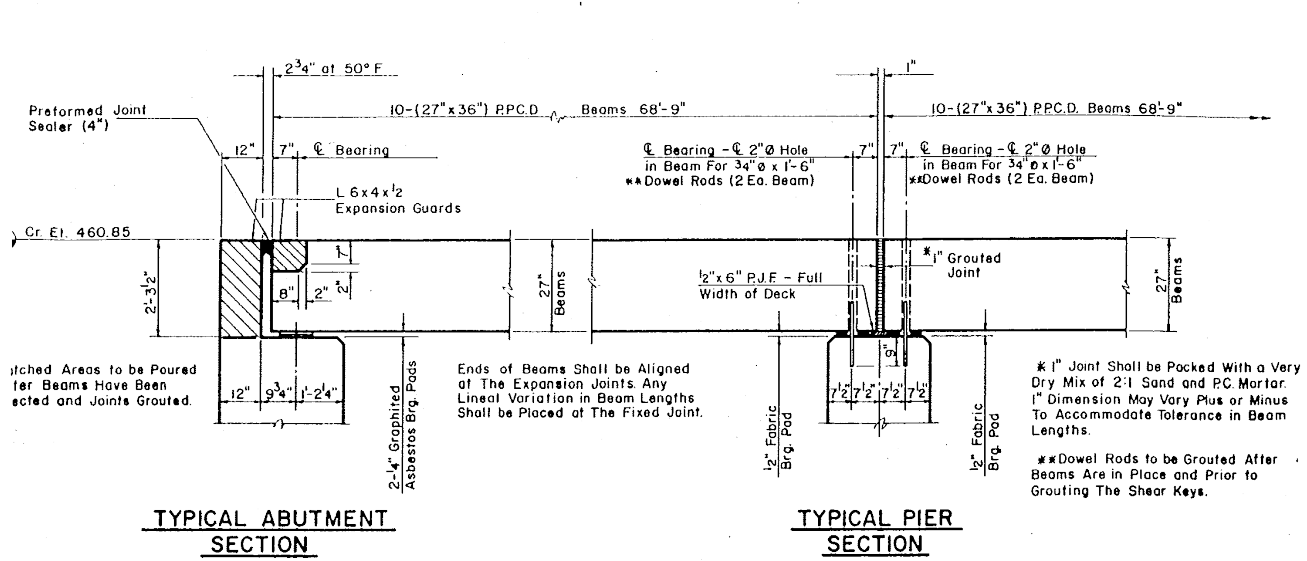
**SUPERSTRUCTURE INTERIOR SPAN**

FOR INFORMATION ONLY

**EXISTING BRIDGE PLANS**

FAS ROUTE 898 (HARCO ROAD)  
 OLD AMAX HAUL ROAD OVERPASS  
 SECTION 17-00156-00-BR  
 SALINE COUNTY





**GENERAL NOTES**

The Standard Specifications For Road & Bridge Construction, Adopted Oct 1, 1979, by The Illinois Department of Transportation, Shall Apply to This Work.

Structural Steel Expansion Guard Angles and Attached Bars Shall be A A S H T O M 183 and Shall be Shop Painted With Two Coats of Basic Lead Silico Chromate Paint. Structural Steel Pier Bent Braces and Splash Shield Supporting Frame Shall be A A S H T O M 183 and Shall be Field Painted With One (1) Primer and Two (2) Finish Coats of Basic Lead Silico Chromate Paint. The Concrete Pile Caps, Superstructure and Encasement Wall Shall be Protected From Rust.

Expansion Guards Shall be Fabricated and Erected in Accordance With Article 503.07 (c) of The Standard Specifications and are Included in The Quantity of Structural Steel.

Backfill Shall be Placed Behind The Abutments After The Superstructure Has Been Placed and Anchored and The Inlet Drain System Has Been Installed.

Class X Concrete Shall be Used For All Cast in Place and Precast Units.

Exposed Edges Shall be Chamfered 3/4" Unless Otherwise Noted.

Reinforcement Bars Shall Conform to The Requirements of A A S H T O M-31 or M-53 Grade 60.

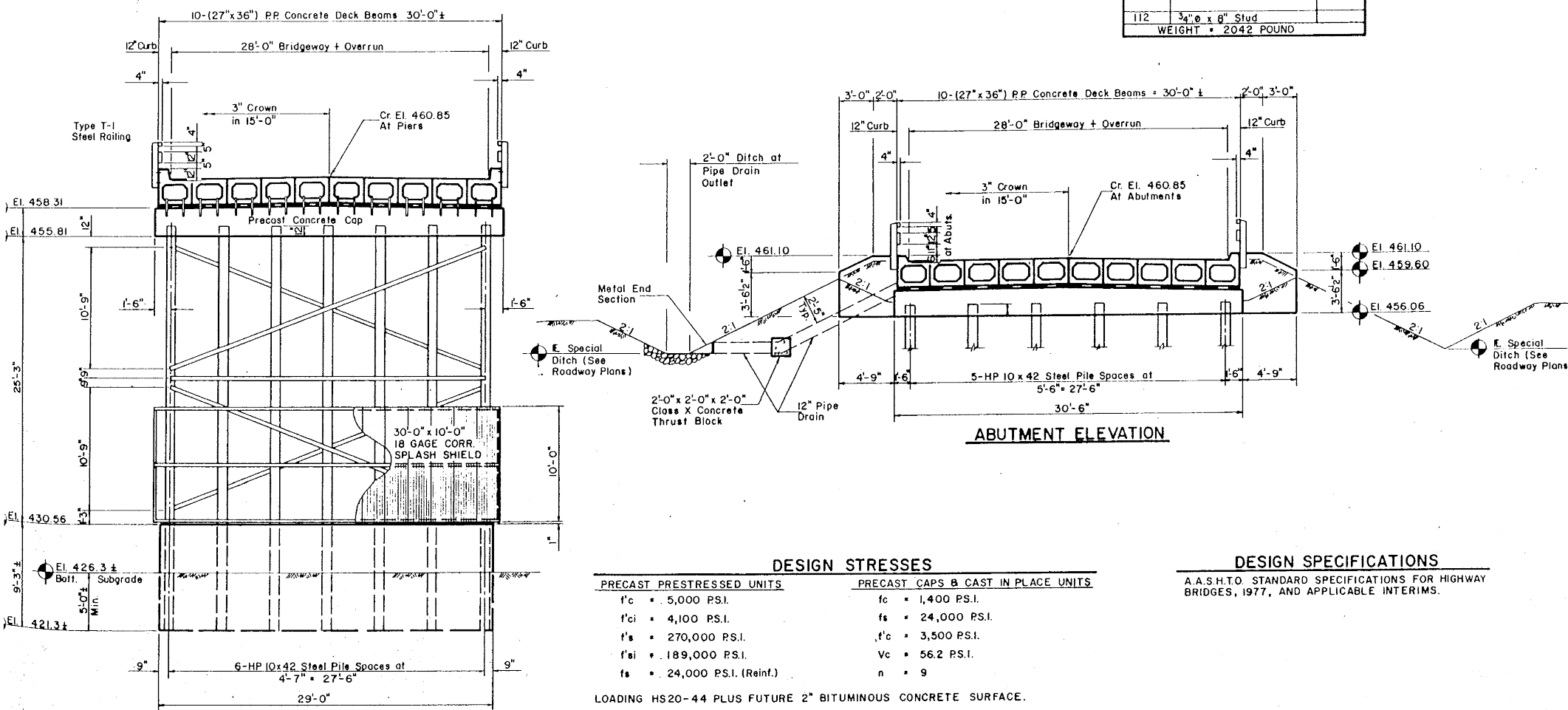
See Proposal For Boring Data.

**STRUCTURAL STEEL SCHEDULE**

NO.	SHAPE	LENGTH
4	L 6 x 4 x 1/2	27'-11 1/2"
4	1/2" Galv. Std. Pipe Drain Bar 1/2" Ø	1'-7"
4	Bar 1/2" Ø	27'-11 1/2"
112	3/4" Ø x 8" Stud	
WEIGHT = 2042 POUND		

**BRIDGE BILL OF MATERIAL**

ITEM	UNIT	SUB	SUPER	TOTAL
Structure Excavation	Cu. Yd.	33		33
Rock Excavation For Structures	Cu. Yd.	14		14
Class X Concrete	Cu. Yd.	57.1	15.8	72.9
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.		6188	6188
Precast Concrete Caps	Each	2		2
Furnishing and Erecting Structural Steel	Pound	2873	2042	4915
Steel Railing, Type T-1	Lin. Ft.		418	418
Pipe Culverts, Type IA, CSCP 12"	Lin. Ft.	48		48
Metal End Sections 12"	Each	2		2
Pipe Drains, Bituminous Coated Corrugated Steel 12"	Lin. Ft.	113		113
Reinforcement Bars	Pound	3962	1396	5358
Furnishing Steel Piles HP 10x42	Lin. Ft.	839		839
Driving Steel Piles	Lin. Ft.	342		342
Setting Piles in Rock	Each	14		14
Name Plates	Each		1	1
Dumped Riprap	Ton	98		98
Frames and Grates, Special Concrete Thrust Blocks	Each	4		4
	Each	2		2
Preformed Joint Sealer 4"	Lin. Ft.		60	60
Steel Sheeting	Sq. Ft.	600		600
Metal Pile Shoes	Each	14		14



**DESIGN STRESSES**

PRECAST PRESTRESSED UNITS	PRECAST CAPS & CAST IN PLACE UNITS
f'c = 5,000 P.S.I.	f'c = 1,400 P.S.I.
f'ci = 4,100 P.S.I.	f's = 24,000 P.S.I.
f's = 270,000 P.S.I.	f'c = 3,500 P.S.I.
f'si = 189,000 P.S.I.	Vc = 56.2 P.S.I.
f's = 24,000 P.S.I. (Reinf.)	n = 9

LOADING HS20-44 PLUS FUTURE 2" BITUMINOUS CONCRETE SURFACE.

**DESIGN SPECIFICATIONS**

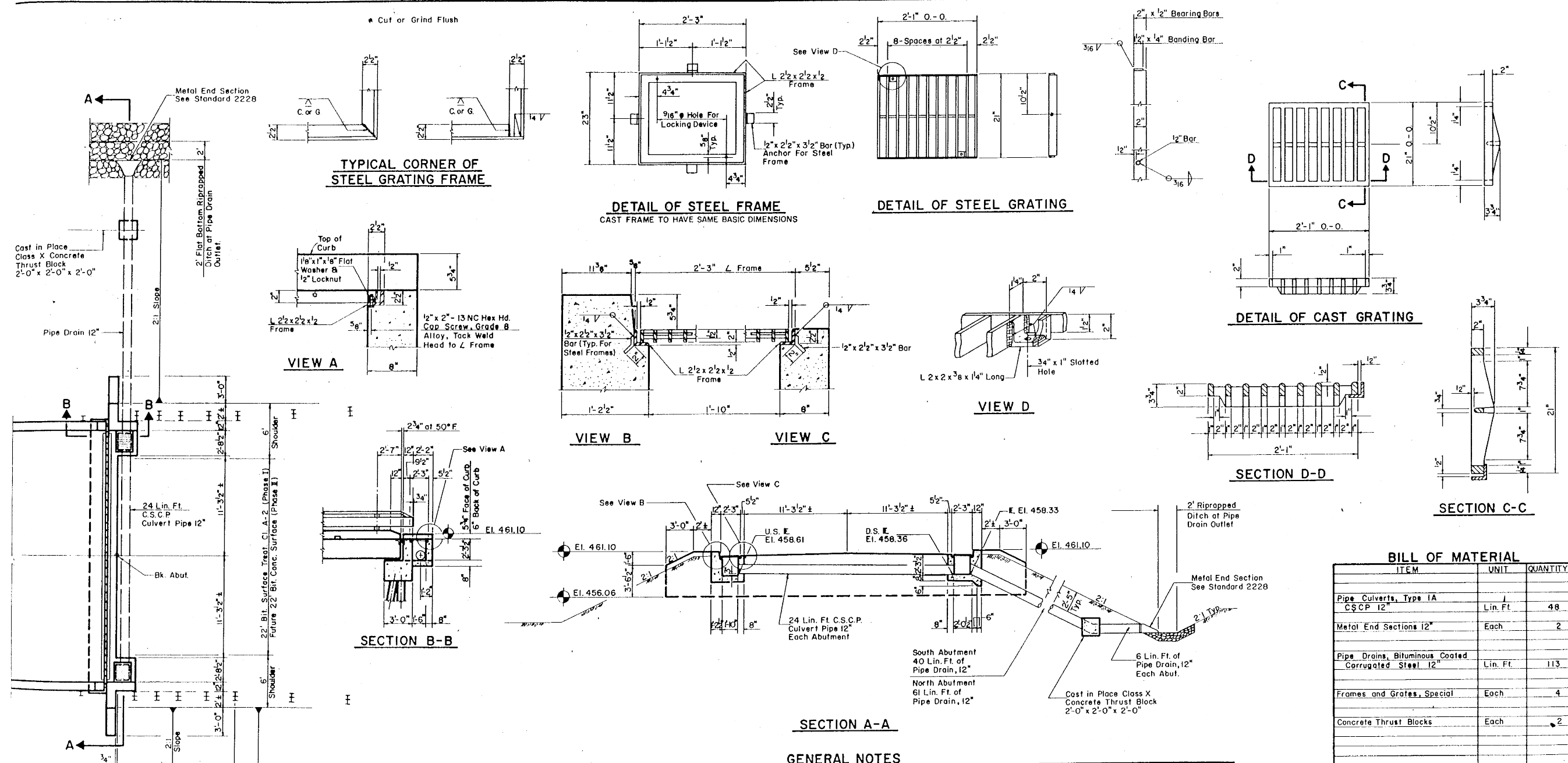
A. A. S. H. T. O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1977, AND APPLICABLE INTERIMS.

GENERAL PLAN & ELEVATION DETAILS

FOR INFORMATION ONLY

EXISTING BRIDGE PLANS

FAS ROUTE 898 (HARCO ROAD)  
 OLD AMAX HAUL ROAD OVERPASS  
 SECTION 17-00156-00-BR  
 SALINE COUNTY



**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Pipe Culverts, Type IA CSCP 12"	Lin. Ft.	48
Metal End Sections 12"	Each	2
Pipe Drains, Bituminous Coated Corrugated Steel 12"	Lin. Ft.	113
Frames and Grates, Special	Each	4
Concrete Thrust Blocks	Each	2

**GENERAL NOTES**

Steel Grating and Frames Shall Conform to Article 710.04 of the Standard Specifications and Shall be Galvanized to A.A.S.H.T.O. Specification Mill After Fabrication.

Cast Gratings and Frames Shall Conform to Article 710.17 of the Standard Specifications. Cast Gratings and Frames Shall Not be Galvanized.

The Grating Shall Seat Firmly in the Frame and Steel Grates Shall be Secured to the Frame with a Locking Device as Shown. Cast Grates Will Not Require the Locking Device.

The Contractor May Use at His Option the Steel Frames and Grating or the Cast Frames and Grating, But Will Not be Allowed to Use the Steel Grating with Cast Frames Nor the Cast Grating with Steel Frames.

The Contractor May at His Option Blockout the Portions of the Inlets Where Pipe Drains and Culvert Pipes Are to be Installed After the Inlet Boxes are Poured. If Blockouts are Utilized, All Voids Around the Pipe Drain and Culvert Pipe Entrances, Both Inside and Outside, Shall be Sealed with Mortar.

Backfill for the Pipe Drains Located on the Roadway Embankment Foreslopes Shall Consist of the Material Excavated from the Trenches and Shall be Placed and Compacted in Six (6) Inch Layers to the Satisfaction of the Engineer by Mechanical Means.

The Foundation for the Culvert Pipe Shall Consist of a Four (4) Inch Layer of Well Compacted Moist Fine Aggregate Placed the Entire Width of the Trench. Backfill for the Culvert Pipe Shall Consist of Impervious Material Excavated from the Trench and Shall be Placed and Compacted in Four (4) Inch Layers to the Satisfaction of the Engineer by Mechanical Means.

Pipe Drains Shall be Installed, Measured and Paid for in Accordance with Section 607 of the Standard Specifications Except as Revised Herein.

Pipe Culverts Shall be Installed, Measured and Paid for in Accordance with Section 511 of the Standard Specifications Except as Revised Herein.

Metal End Sections Shall be Installed, Measured and Paid for in Accordance with Section 511 of the Standard Specifications.

The Contract Unit Price "Each" for FRAMES AND GRATES, SPECIAL, Shall Include Furnishing All Materials, Fabricating, Galvanizing if Necessary, Transporting and Placing Frames and Gratings.

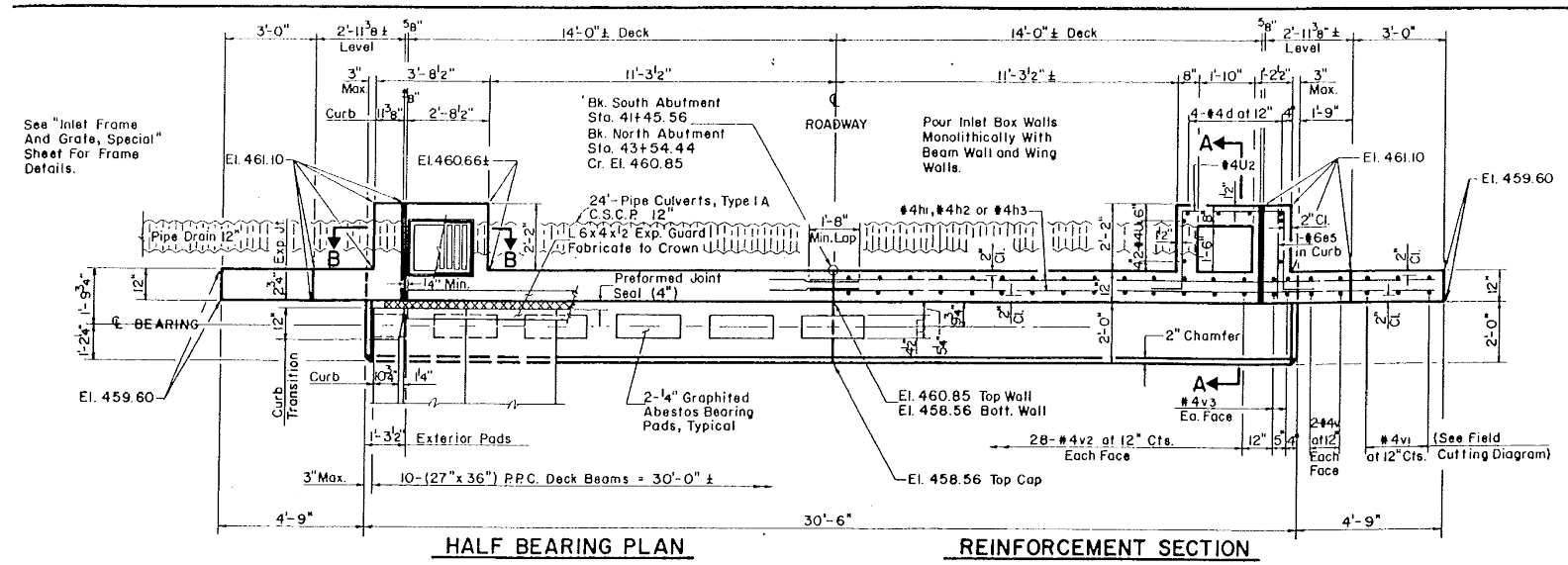
The Contract Unit Price "Each" for CONCRETE THRUST BLOCKS, in Place, Shall Include Excavation and Compacted Backfilling.

INLET FRAME & GRATE, SPECIAL

FOR INFORMATION ONLY

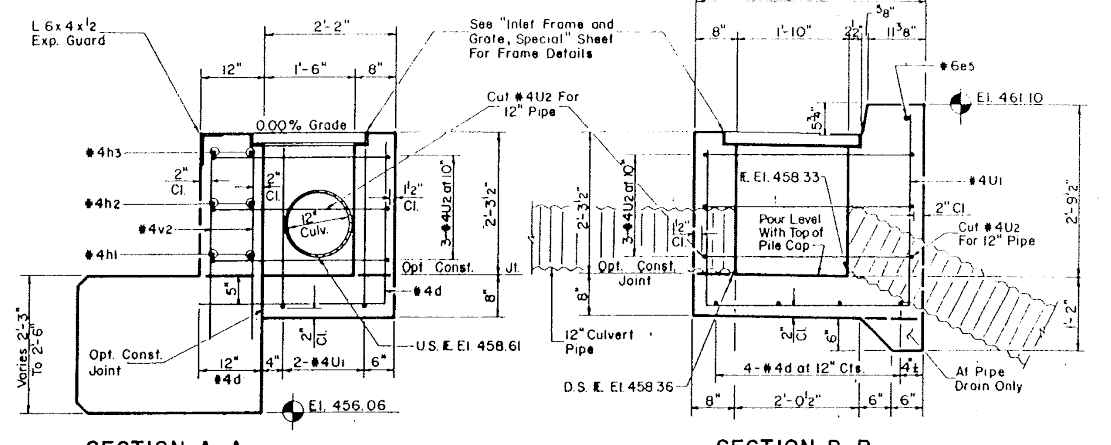
EXISTING BRIDGE PLANS  
FAS ROUTE 898 (HARCO ROAD)  
OLD AMAX HAUL ROAD OVERPASS  
SECTION 17-00156-00-BR  
SALINE COUNTY

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	11
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	

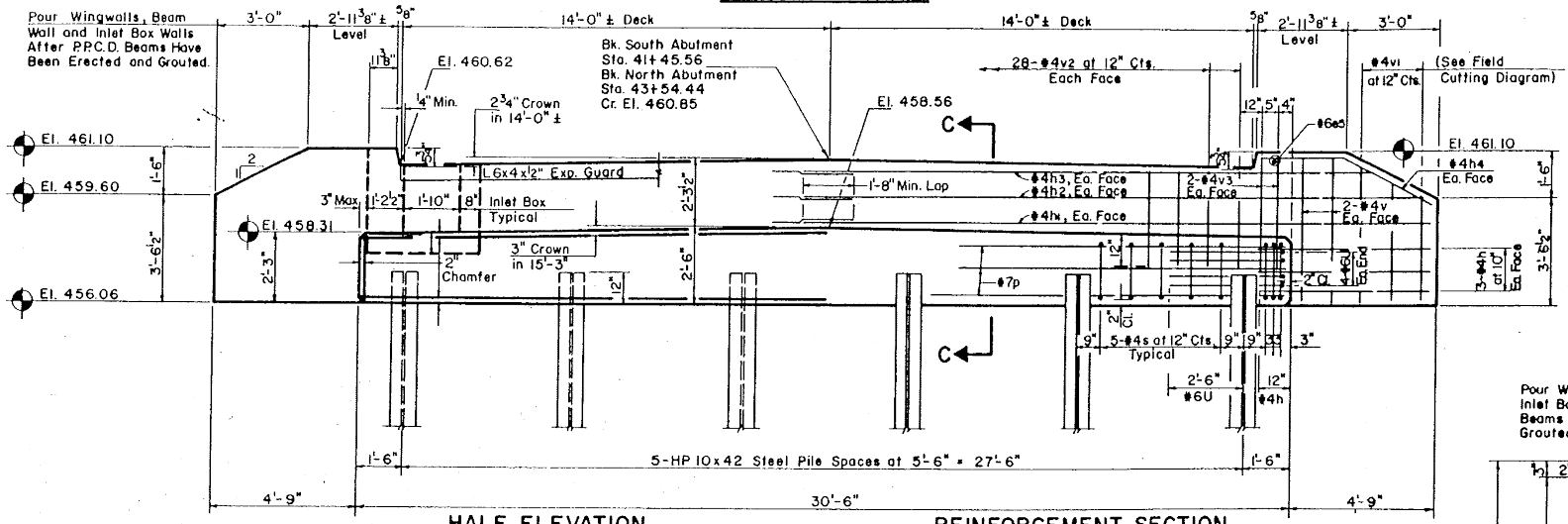


HALF BEARING PLAN  
REINFORCEMENT SECTION

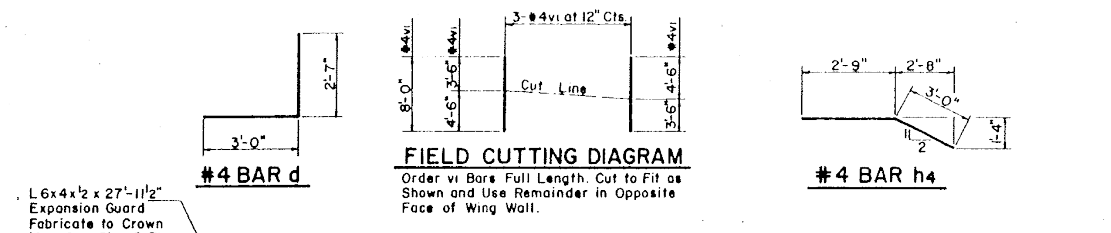
NOTE:  
Inlet Base Slab May be Paired After the Abutment Pile Cap Has Been Paired and Partially Backfilled.



SECTION A-A  
SECTION B-B



HALF ELEVATION  
REINFORCEMENT SECTION

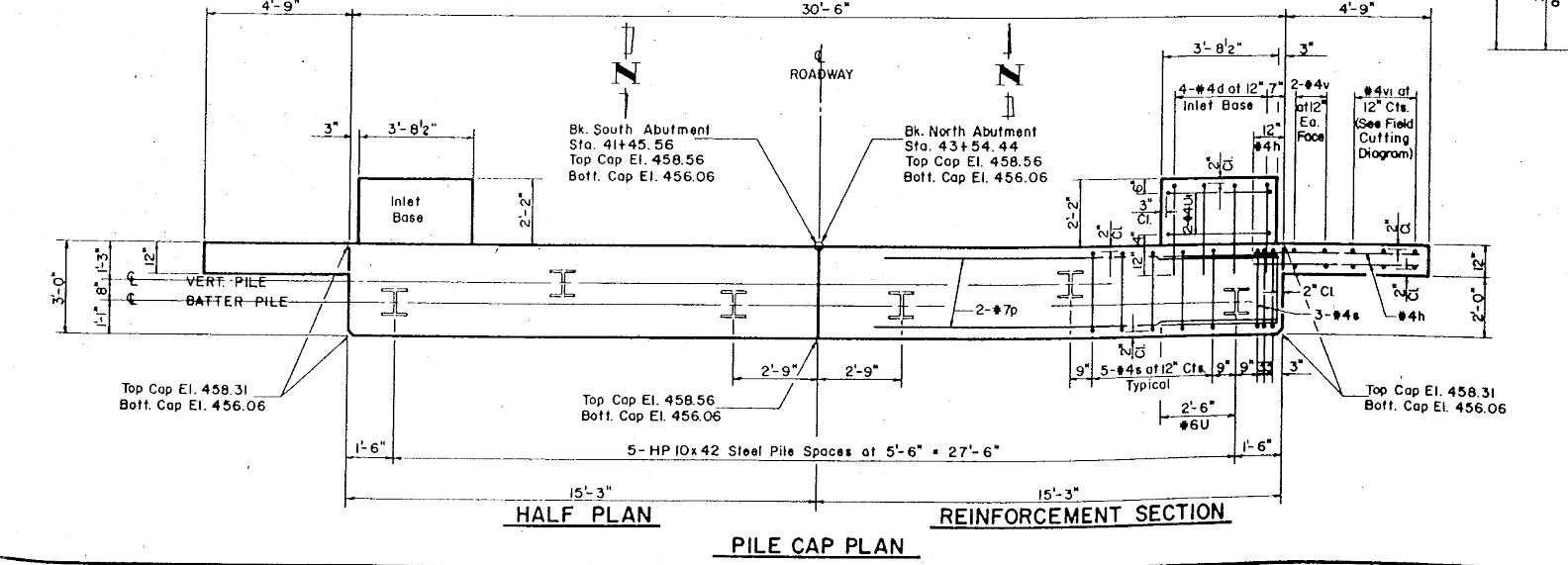


FIELD CUTTING DIAGRAM  
ORDER V. BARS FULL LENGTH. CUT TO FIT AS SHOWN AND USE REMAINDER IN OPPOSITE FACE OF WING WALL.

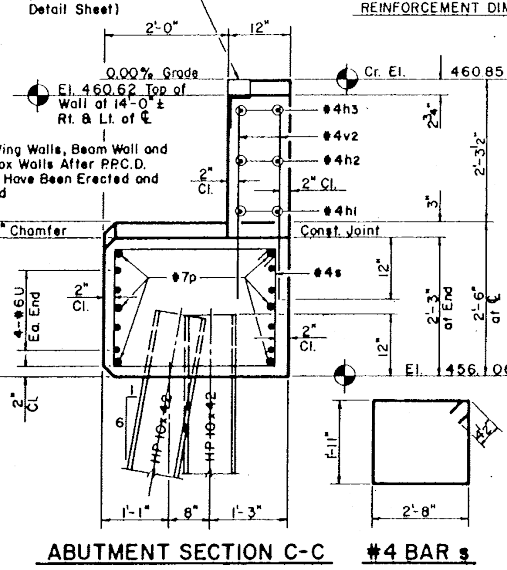
SOUTH & NORTH ABUTMENTS

BAR	NO.	SIZE	LENGTH	SHAPE
d	16	4	5'-7"	U
e5	4	6	2'-10"	U
h	24	4	5'-7"	U
h1	8	4	20'-8"	U
h2	8	4	20'-6"	U
h3	8	4	18'-10"	U
h4	8	4	5'-9"	U
p	12	7	30'-2"	U
s	62	4	9'-11"	U
u	16	6	10'-3"	U
u1	8	4	9'-2"	U
u2	12	4	11'-1"	U
v	16	4	4'-9"	U
v1	12	4	8'-0"	U
v2	112	4	3'-1"	U
v3	16	4	3'-7"	U
Structure Excavation				
Class X Concrete				
Reinforcement Bars				
Furnishing Steel Piles				
HP 10x42				
Driving Steel Piles				
Lin. Ft.				
342				
342				

ABUTMENTS



HALF PLAN  
REINFORCEMENT SECTION



ABUTMENT SECTION C-C  
#4 BAR s  
#4 BAR U2

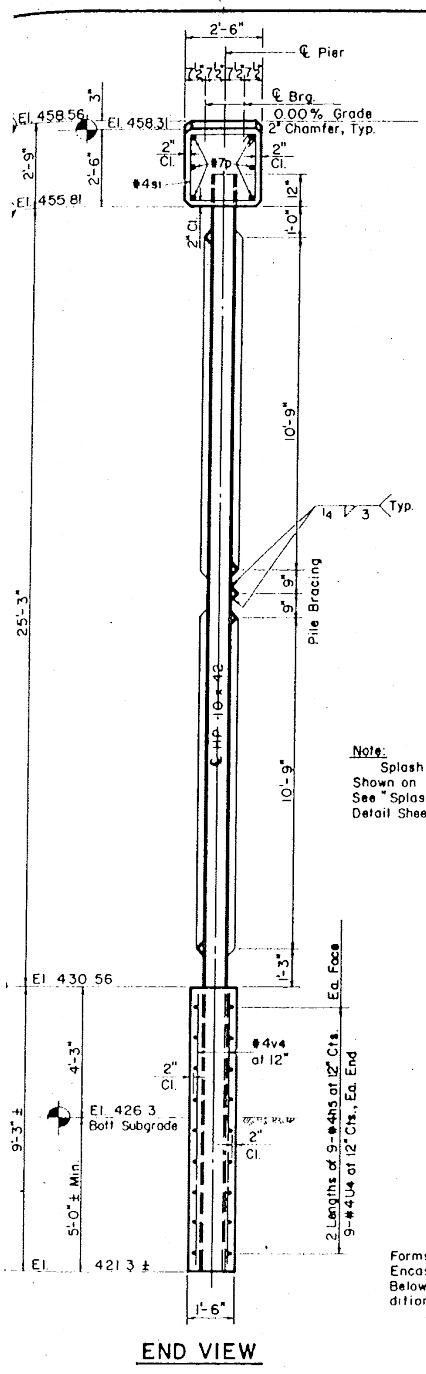
PILE DATA

TYPE: HP 10x42  
CAPACITY: Drive to Refusal  
NUMBER REQUIRED & ESTIMATED LENGTH  
SOUTH ABUTMENT  
2-Vertical Pile 36 Lin. Ft./Pile  
4-Batter Pile 36 Lin. Ft./Pile  
NORTH ABUTMENT  
2-Vertical Pile 21 Lin. Ft./Pile  
4-Batter Pile 21 Lin. Ft./Pile

FOR INFORMATION ONLY

EXISTING BRIDGE PLANS

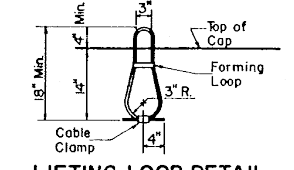
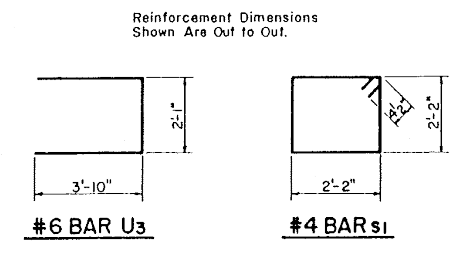
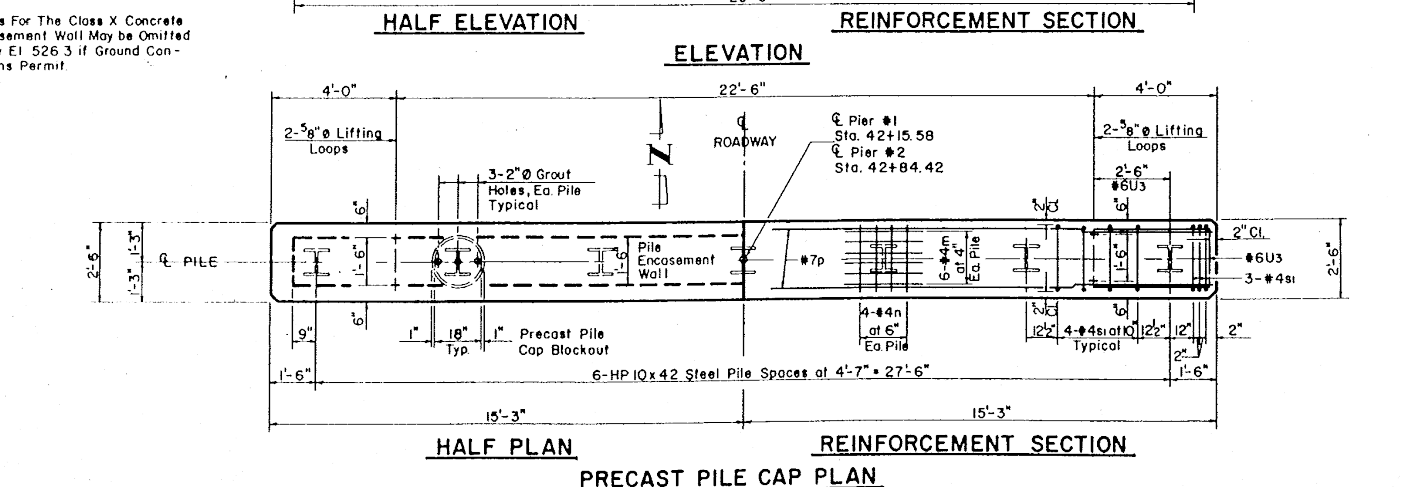
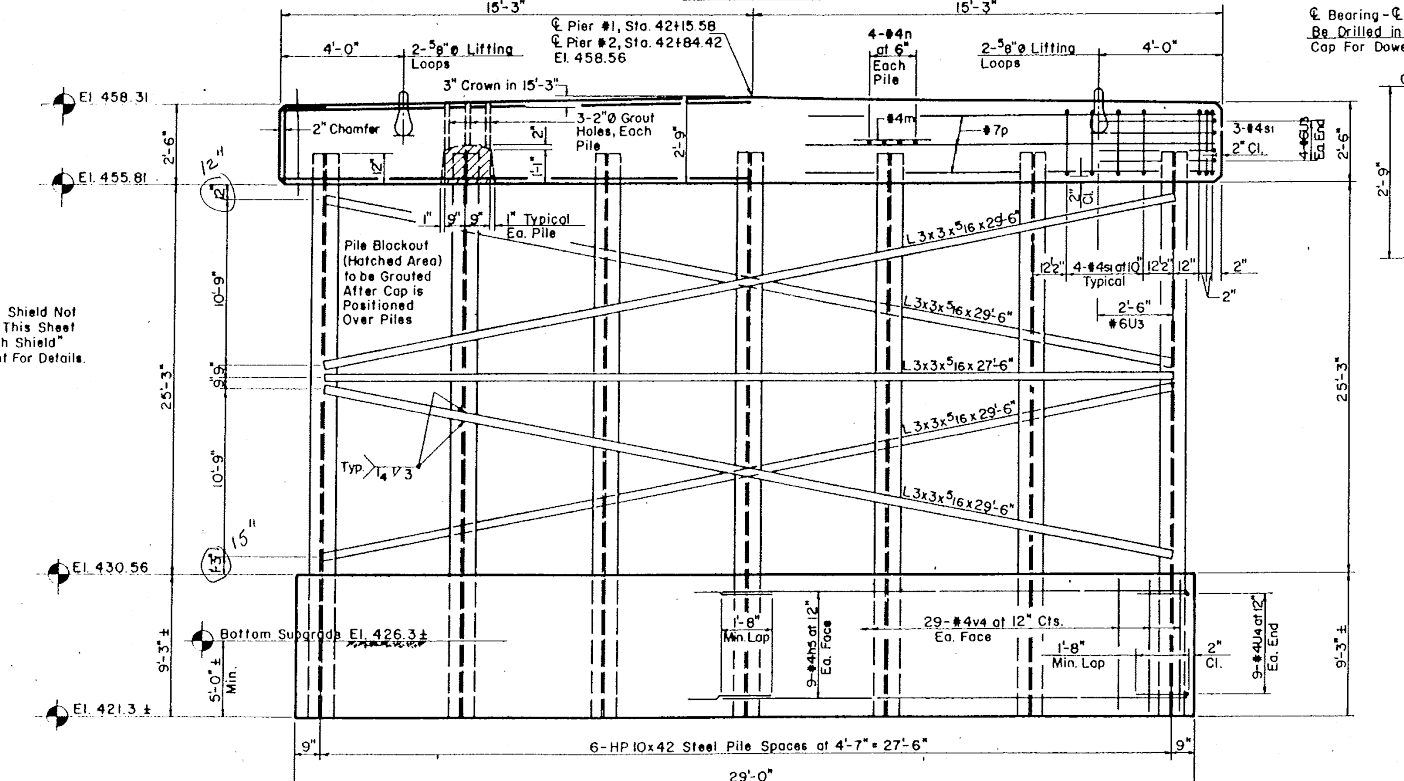
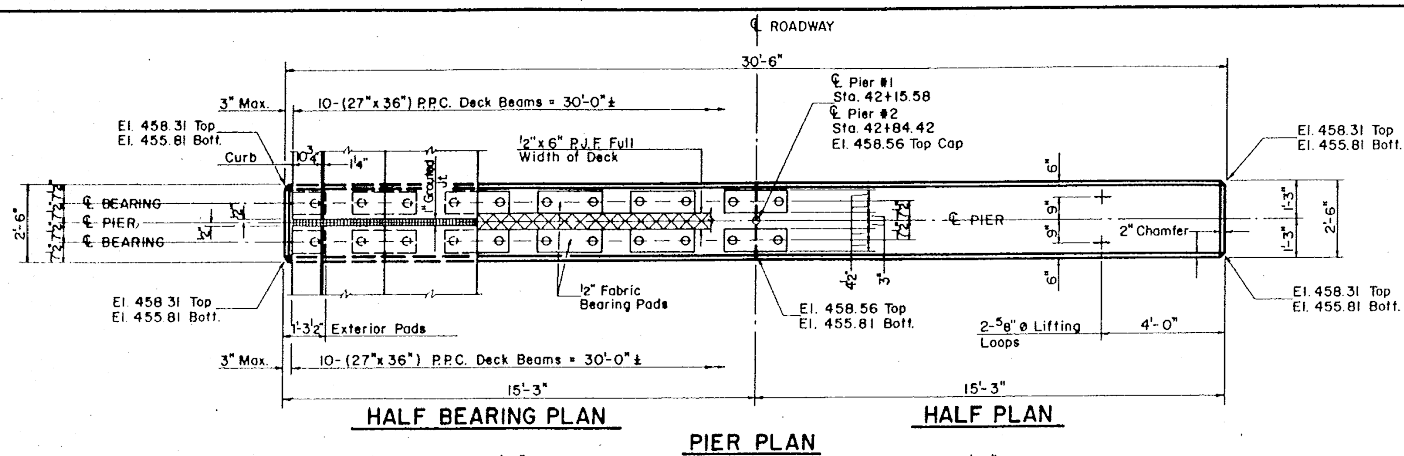
FAS ROUTE 898 (HARCO ROAD)  
OLD AMAX HAUL ROAD OVERPASS  
SECTION 17-00156-00-BR  
SALINE COUNTY



**PILE DATA**

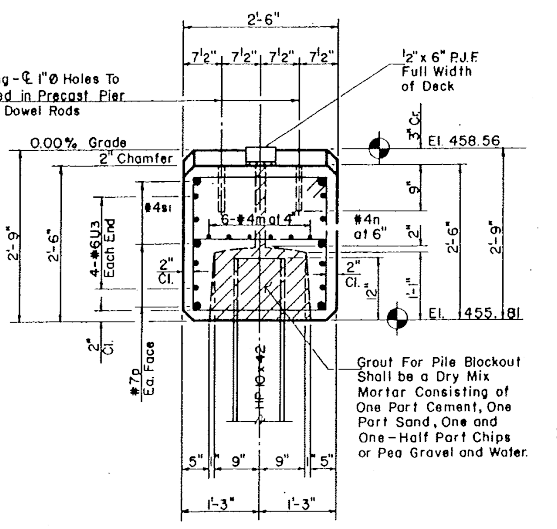
TYPE: HP 10 x 42  
 NUMBER REQ'D: 7 Per Pier  
 ESTIMATED LENGTH: 35.5 Lin Ft / Pile  
 Seat Pile With Pile Driver Before Pouring Class X Concrete Encasement Wall, Erecting Structural Steel Bracing or Erecting and Grouting Precast Concrete Caps.

Metal Pile Shoes, APF Hard Bite HP 77600 Points or Cast Steel Equal



**LIFTING LOOP DETAIL**

Each Precast Concrete Cap Shall Have Four Lifting Loops, Two Cast in Each End. Loops Shall be Burned Off After Caps Have Been Erected. Lifting Loops Shall be 5/8"Ø - 6x25 Class Wire Rope With Fiber Core With a Minimum Ultimate Tensile Strength of 33,000 LBS, or 2-7 Wire Stress Relieved 1/2"Ø - 270 K.S.I. Strands.



**PRECAST CONCRETE CAPS SHOP MATERIAL LIST (2 CAPS)**

BAR	NO.	SIZE	LENGTH
m	84	4	2'-6"
n	56	4	2'-2"
p	12	7	30'-2"
s1	60	4	9'-5"
U3	16	6	9'-9"
L	8	5/8"Ø Lifting Loops	

Cap Weight = 30,020 Pound Each

**STRUCTURAL STEEL SCHEDULE (2 PIERS)**

NO.	SHAPE	LENGTH
8	L 3 x 3 x 5/16	29'-6"
2	L 3 x 3 x 5/16	27'-6"

Weight = 1775 Pound

**PIER #1 & PIER #2**

BAR	NO.	SIZE	LENGTH	SHAPE
h5	72	4	15'-2"	
u4	36	4	4'-6"	
v4	116	4	8'-10"	
Structural Excavation				Cu. Yd. 8
Rock Excavation				Cu. Yd. 14
For Structures				Cu. Yd. 29.8
Class X Concrete				Each 2
Precast Concrete Caps				Pound 1775
Furnishing and Erecting Structural Steel				Pound 1522
Reinforcement Bars				Lin. Ft. 497
Furnishing Steel				Each 14
Piles HP 10 x 42				Each 14
Setting Piles in Rock				Each 14
Metal Pile Shoes				Each 14

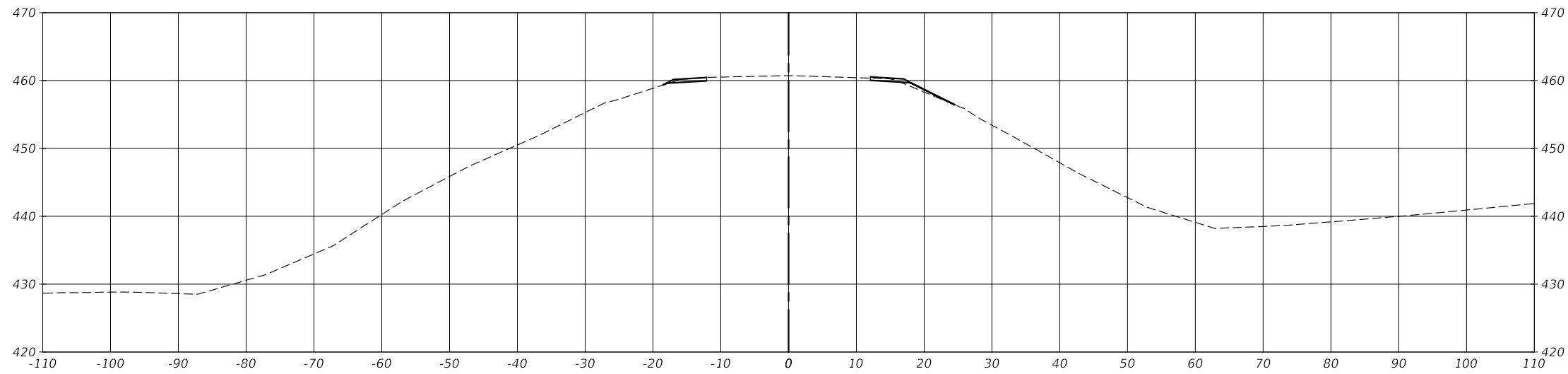
PIERS

FOR INFORMATION ONLY

EXISTING BRIDGE PLANS

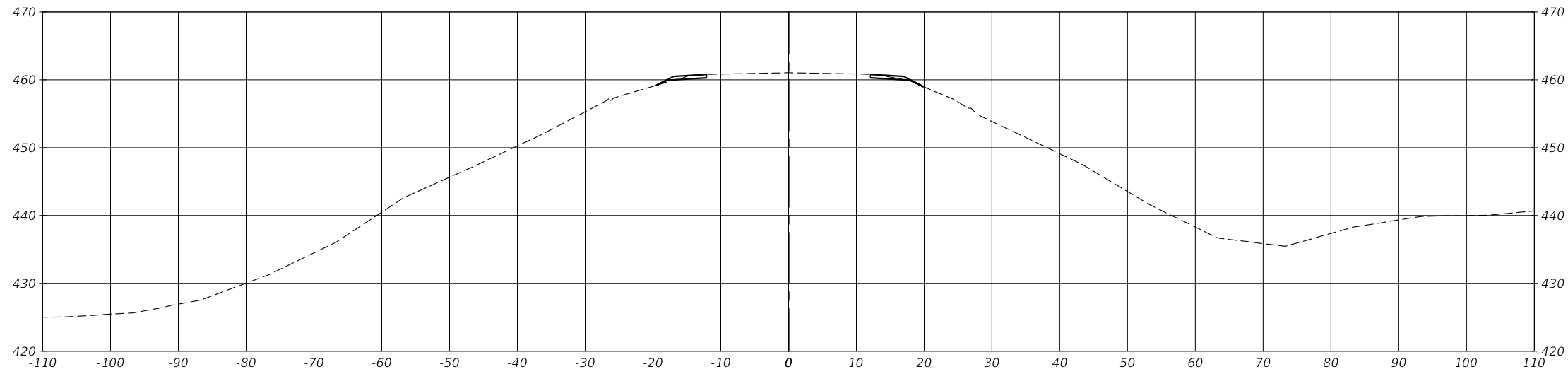
FAS ROUTE 898 (HARCO ROAD)  
 OLD AMAX HAUL ROAD OVERPASS  
 SECTION 17-00156-00-BR  
 SALINE COUNTY

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	13
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	



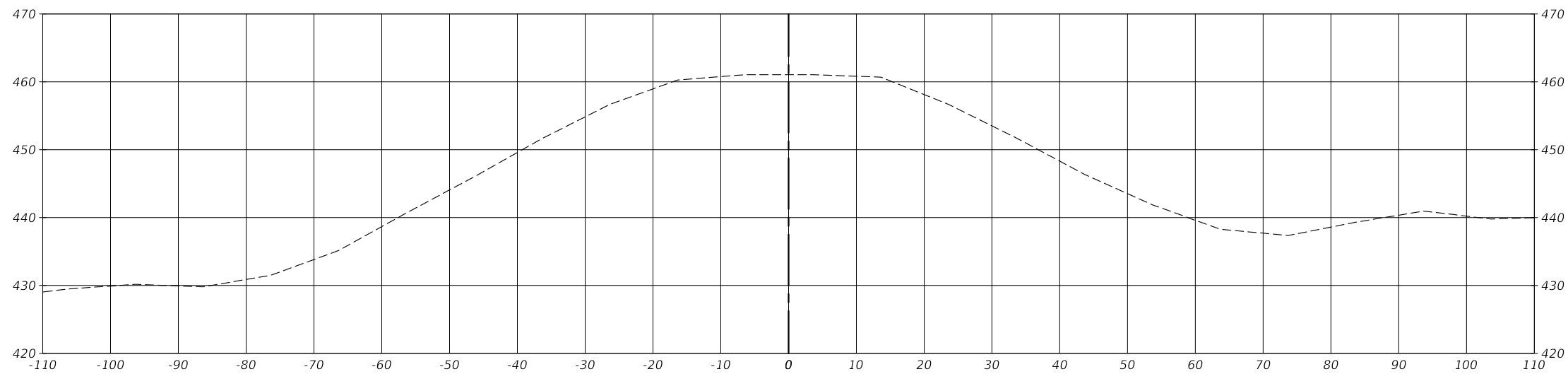
**SECTION 40+50**

Cut Area: 3.69  
Fill Area: 3.52



**SECTION 40+00**

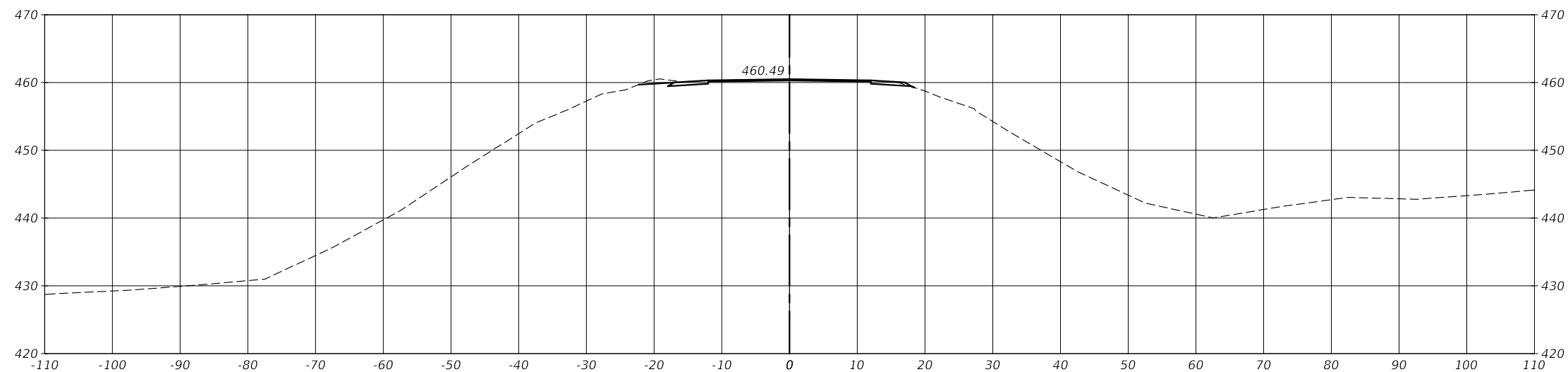
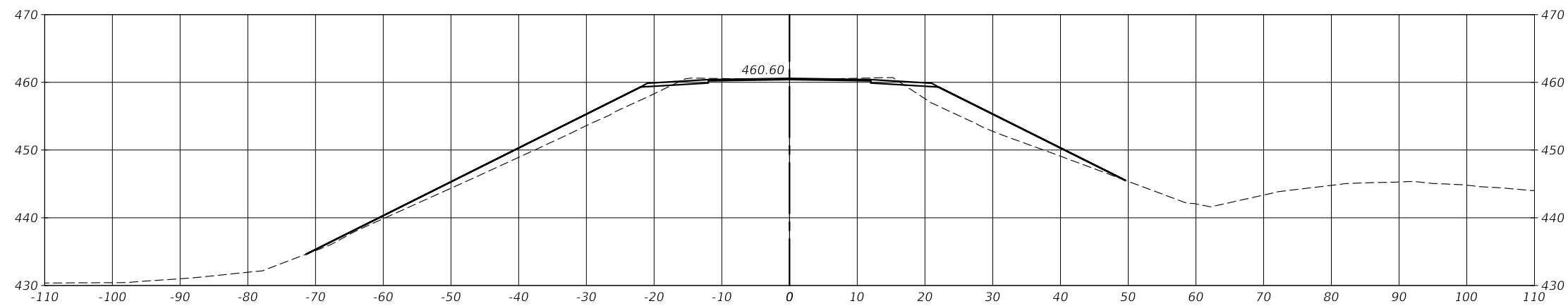
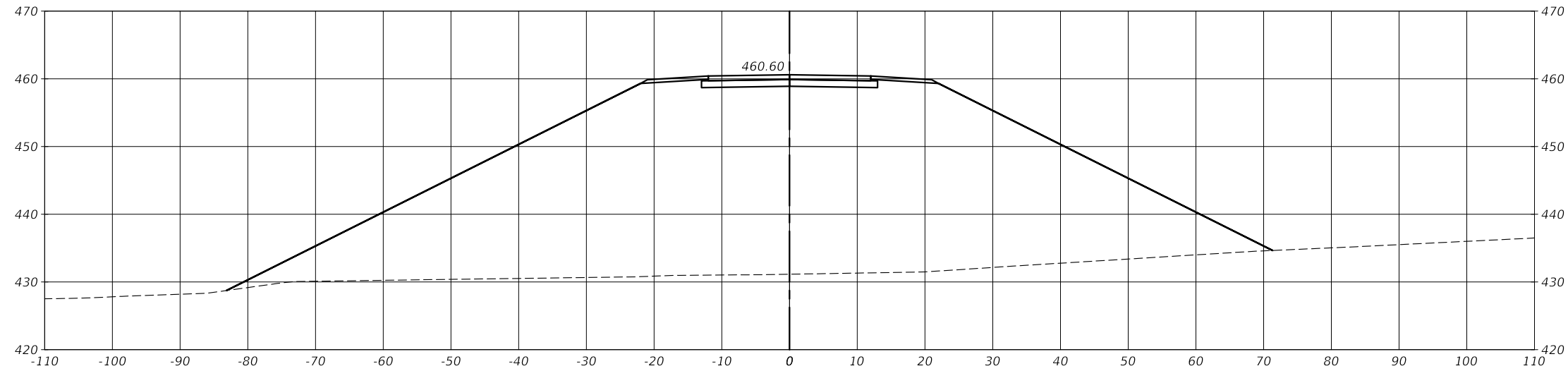
Cut Area: 4.01  
Fill Area: 0.62



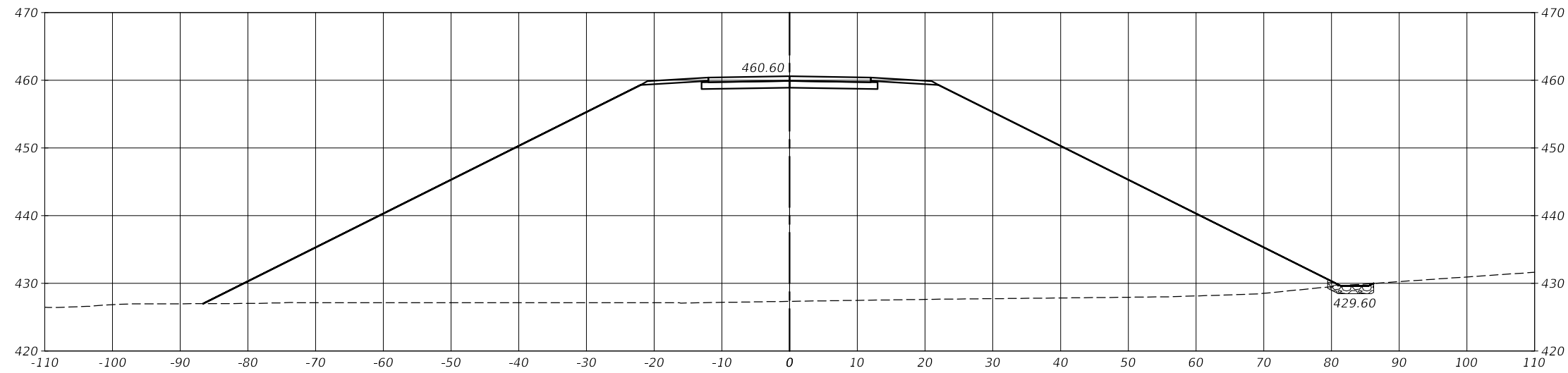
**SECTION 39+50**

Cut Area: 0.00  
Fill Area: 0.00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	14
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	

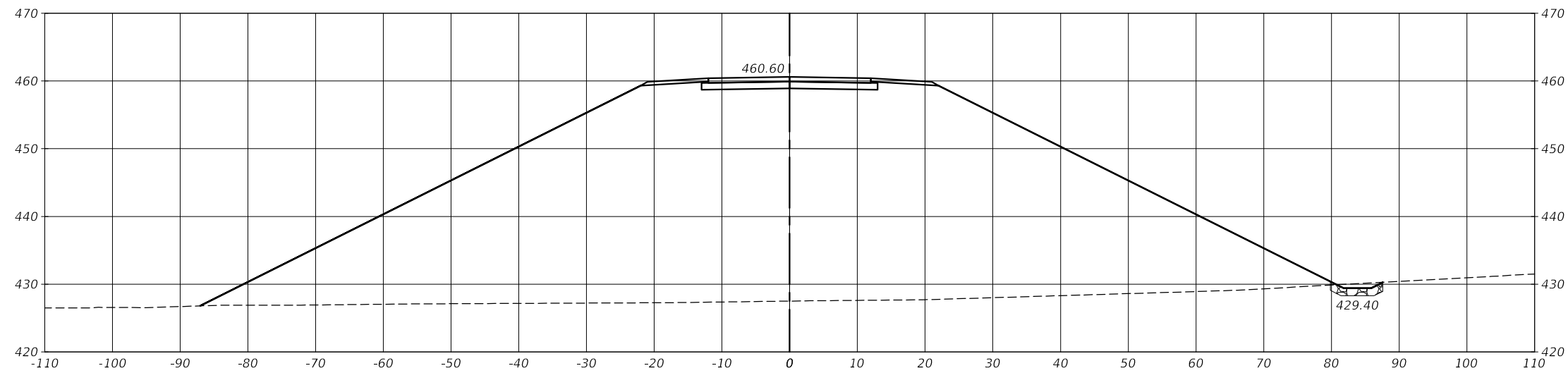


ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	15
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	



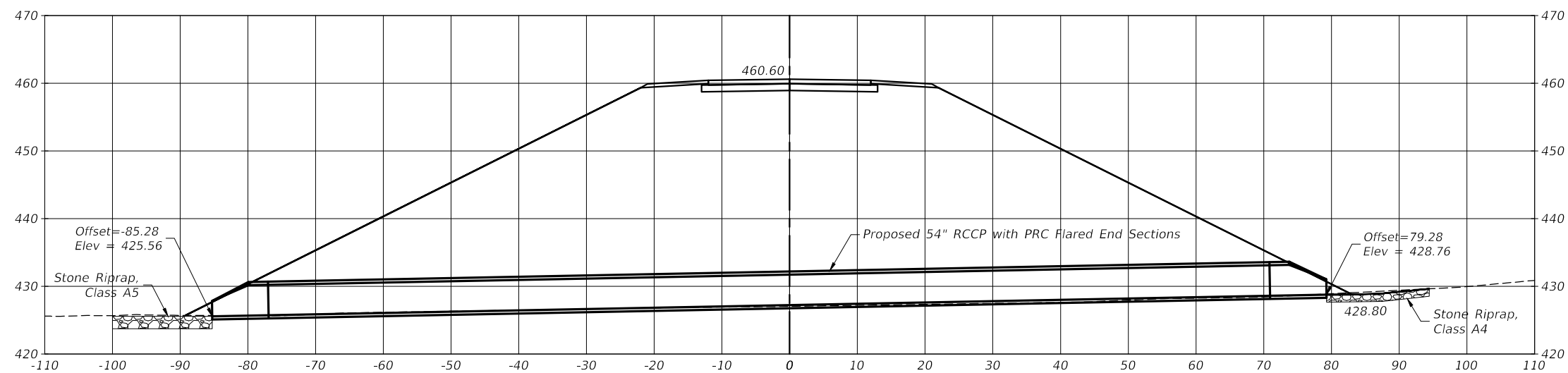
**SECTION 42+75**

Cut Area: 1.01  
Fill Area: 3400.79



**SECTION 42+50**

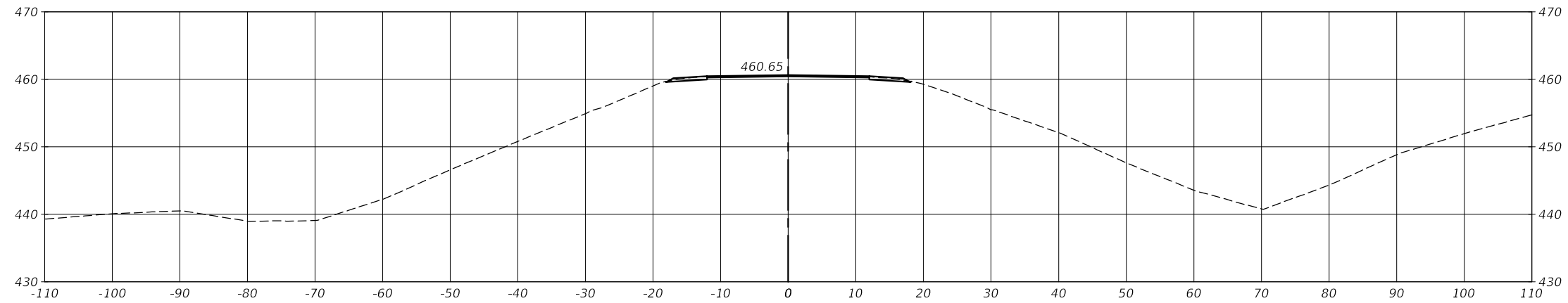
Cut Area: 3.60  
Fill Area: 3370.77



**SECTION 42+25**

Cut Area: 2.36  
Fill Area: 3489.55

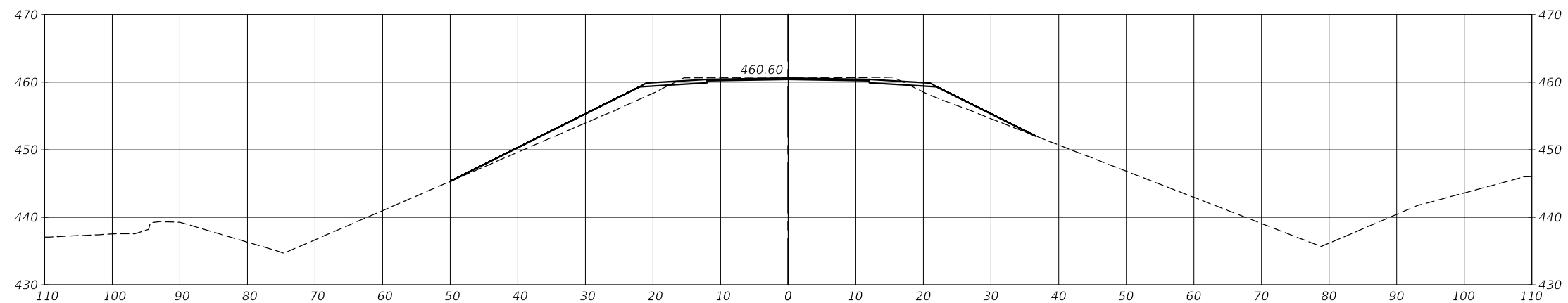
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	16
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	



SECTION 44+00

Cut Area: 8.21

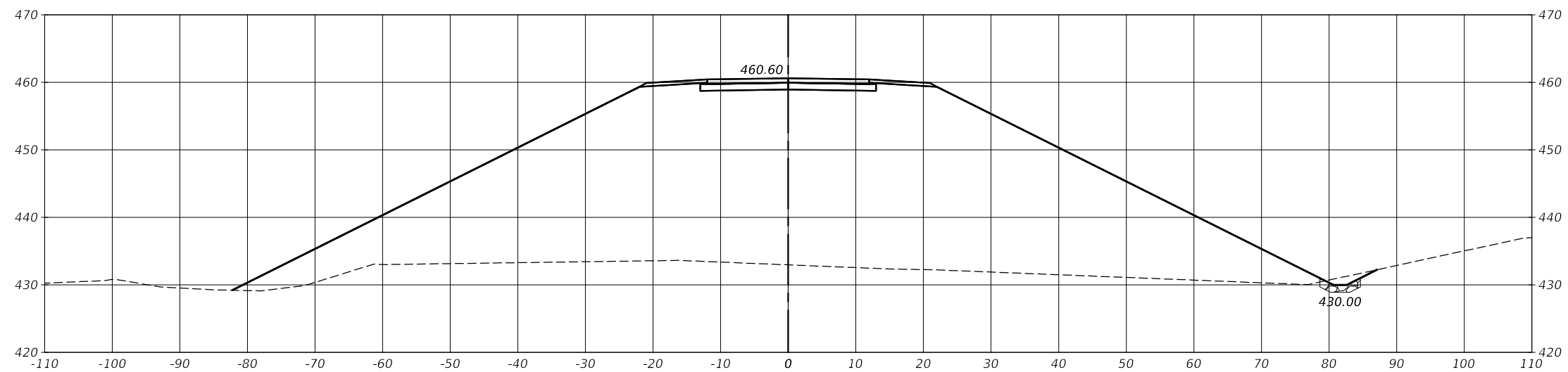
Fill Area: 0.00



SECTION 43+57

Cut Area: 34.38

Fill Area: 46.30



SECTION 43+00

Cut Area: 5.34

Fill Area: 2673.71



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 898	17-00156-00-BR	SALINE	17	17
PROJECT NO. AFJH(884)			CONTRACT NO. 99600	

